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PSYCHOLOGY AND PHILOSOPHY.

I.—NOTES ON REFORM IN LOGIC.

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ALMOST every one would admit that the technical terms of what is usually taught as Logic are to a great extent survivals from philosophies now very largely superseded. As exercises for the student's memory, and as affording material for examination questions, they may still have a value. To the thorough-going student of the history of philosophy they will probably always be interesting. But for any other purpose, except that of causing confusion and hindering progress in a subject which is difficult enough even without them, they have long been losing the value they formerly had. 'Logic' bristles with terms which have gradually sunk out of use, as argument has ceased to be a game with rules laid down by authority.

An attempt to make a complete list of these high and dry technicalities is here unnecessary, since in their case the best reform one can propose is to follow the practice of common-sense and drop them quietly out of remembrance.[1] In order to do this we need not know beforehand precisely which they are. We need only adopt the simple rule that the first question to be asked regarding any logical technicality is, What is its actual value in helping us to understand

[1] Except, of course, for those advanced students whose interest lies chiefly in the history of the subject.

the process of argument? At any rate, the terms proposed as worth preserving must show other credentials than the fact of having been handed down to us, before we can safely assume that there is any such value in them, for us whose philosophy is so different from that of the Middle Ages.

Still an instance or two may be useful as showing the kind of technicality for which it is hard to find any practical justification. Those who have ever had to teach elementary logic for examination will remember the stimulating effect produced on a class of beginners when the meaning of some sonorous and respectable word is explained to them,—some word like *syncategorematic, epicheirema, polysyllogism*, or the *Goclenian Sorites*. Such words are welcomed with (comparative) eagerness as something definite, something that can be learnt, and reproduced at the proper time on paper. The Goclenian Sorites seems to be an especial favourite, probably from the simplicity of the contrast between it and the Sorites which the books call ordinary. Of further examples the first that come to hand are: *relative* and *privative* terms; *exponible, copulative, remotive, exceptive, exclusive, indefinite, plurative, limitative, propositions; subcontrary* and *subaltern* opposition; and most of the machinery of the Syllogism, with its *Barbara, Celarent*, and the rest of the 'valid moods'.

But such technicalities are mentioned here only to be dismissed entirely from consideration. There remain also in Logic a good many technical terms of a different sort, possessing a value which is not merely historical; and it is these that appear to deserve reformation instead of burial. The suggestion I would make in regard to them is simple enough in idea, and perhaps we need not despair of it being made capable of application.

In the last two or three centuries a great change has begun to come over our philosophy, including that freer and less exact philosophy which is known as Common-Sense. The change is still in progress and is far from being accomplished, but its general tendency is plain to see. It consists especially in our gradual escape from a subtle form of mental slavery,—from the bondage of words. We are learning that words, after all, are only counters—instruments of expression—and that every distinction drawn by language is open to criticism in the light of our knowledge of facts. We are becoming accustomed to find that a distinction may be perfectly sharp in *idea*, while the actual classes distinguished shade off into one another and so do not fit either of the sharply-contrasted names.

The technical terms of Logic, like all other terms, imply distinctions drawn. If we name, for instance, kinds of term, or kinds of proposition, or kinds of argument, the process is plainly one of distinction. And the same where we divide arguments or propositions into their component parts, or separate the 'meaning' of terms into connotation and denotation. On some distinction or other, every descriptive term is based. And the reform here proposed is merely that of recognising the real (or actual) roughness of all the distinctions drawn in Logic, in spite of the sharpness with which they may appear to be drawn. Such recognition will have various effects, and the best way of understanding what is involved in it will be to trace out some of those effects in detail.

But first let us admit, regretfully or otherwise, the fact that any proposal for a wholesale alteration of logical terminology is unlikely to meet with general acceptance. The most one can reasonably hope to do is to drive the thin end of a wedge a little further in. Instead, therefore, of suggesting a set of new technical terms, or even new ways of *defining* the old ones, I here only try to express certain reflexions that may accompany our use of the old technicalities, in much the same way as our remembrance of the fact that the earth revolves may accompany our use of the word *sunset*. Let us keep the old technicalities, by all means, so long as we can anyhow render them harmless. This plan is rather more troublesome, perhaps, but will cause less offence to our conservative instincts.

To begin with the most central technicality of Logic: what is a *proposition?* This term is commonly made to do duty for two very different meanings. It is used indifferently for the assertion expressed in a sentence, and for the sentence in which the assertion is expressed.[1] The simplest remedy would consist in avoiding the word proposition altogether, and substituting for it one of the words *assertion* or *sentence*, whichever we happen to mean; but we may also attain the

[1] If the reader, by chance, finds it difficult to separate sentence from assertion, even in thought, that is the very thing I complain of, as one of the ill effects of Logic as commonly taught. Two suggestions may here be of special service to such a reader;—that the assertion is not necessarily something *revealed* by the sentence, but something *revealed or concealed* by it; and that the distinction between assertion and sentence is analogous to that between *nobility* and *rank*. No doubt there are people who cannot sever these latter things, even in thought. Yet the ideas are distinguishable, as soon as we learn that rank (external form) may either reveal nobility or conceal the absence of it.

same end by keeping the word proposition in use, and merely remembering its defects on the proper occasions.

It is not difficult to see how the confusion between assertion and sentence arises. The *ideal* proposition is an assertion, but the *actual* proposition is always a sentence, just as the ideal nobleman is noble, while the actual nobleman is a titled man. In the case of assertion and sentence, however, there is more excuse for the failure to distinguish, since we cannot conceive what any assertion is or means except by putting it into a sentence. And though a sentence without a meaning may easily be invented, this is practically never done.[1] Sentences, as we meet with them, are used for the purpose of conveying meanings, however imperfectly they may succeed in doing so. Hence, as soon as we distinguish kinds of assertion, and ask what actual assertions belong to each kind, we very naturally bring forward not assertions but sentences to illustrate our distinctions. Thus we give the *sentence* 'All men are mortal,' as an instance of the universal affirmative *assertion;* and by calling both the example and that which it exemplifies a *proposition* we hide from ourselves whatever risk there may be in the above proceeding.

The inevitable result is that 'Logic' gives us a classification of sentences in place of a classification of assertions. Partly through the labours of Aristotle and the Schoolmen, partly with the aid of more recent grammar, we are in possession of a fair amount of knowledge of the sentence-forms that meaning commonly takes. It is doubtless true, for instance, that when we say: 'All S are P,' we commonly mean to express the 'universal' affirmative meaning; these common forms were not invented by philosophers for amusement, but to a great extent arise from the general consent of practical men who desire to find the best means of expressing their thoughts. All this may be admitted to the fullest extent,—in fact, every writer knows that he must on the whole obey grammar and custom if he wishes his readers to understand him—and yet the opposite side of the truth should also not be forgotten.

For, no grammar—no reflexions on custom—can adequately represent so complex and shifting a set of phenomena as those of the expression of meanings. We may do full justice to 'general consent' and yet admit that language-

[1] The exceptions to this rule are reduced to complete unimportance if we reflect that a (so-called) 'meaningless' sentence produces no fallacy until a *wrong meaning* is put upon it.

forms are largely an accident of time and place, not to speak of those finer differences that depend upon the varying mental constitution of different people, or upon the degree of assertiveness with which the assertion happens to be made. The failure of 'Logic' to cope with such facts as these—facts not exceptional or unimportant, but of immense and direct practical weight in dealing with any assertion or argument—is so notorious that now-a-days to appeal to Logic in support of any opinion is almost enough to spoil our chance of persuading common-sense to accept it. "I will not admit that the whole is greater than the part, unless you tell me how you are going to use the admission." It is not, in the end, the words that make a meaning, but the uses to which we put them.

A sentence may thus not only carry different meanings to different people, but may represent to the same person different kinds of assertion indifferently. This will perhaps be disputed at first by those whose minds are full of the grammar-logic here attacked; but, if they wish to avoid begging the question, they will rather notice that the answer yes or no depends on the view we take as to the nature of *meaning*, while this again depends on whether we do or do not keep clear the distinction between assertion and sentence. So long as we think of a meaning as itself a sentence (or as something necessarily revealed by the sentence) instead of as the assertion revealed or concealed by the sentence, we are hardly ready to recognise its shifting character,—we tend to suppose the 'meaning' of a sentence to be something inherent in the sentence itself (like specific gravity in this or that kind of substance), not something dependent on the intention of the parties using it (like the force of a mathematical symbol). We thus become grammarians rather than logicians, and spend our energies on searching for 'the logical meaning' of the words, *some*, and *or*, and similar expressions which in practice have more than a single meaning.

Let us follow out a little further the results of remembering that assertion and sentence are not the same thing. Suppose, for instance, we try to make a classification of assertions,—if only for tacit use, along with the classification of sentences that the present logic so carefully provides. As soon as we recognise that it is not the words that make a meaning, but the use to which they are put, two important consequences follow; words, we must then recognise, get their meaning and character from the assertions they help to express, and assertions get their meaning and character from

the arguments into which they enter; or, more exactly, from the purpose they are made to serve in some argument; not necessarily the purpose for which 'most people' use them on most occasions, but that for which the assertor uses them at some particular time.

Kinds of assertion thus become, in effect, kinds of *use in argument*. And here, under whatever names[1] we choose for the kinds distinguished, the most important division is that between the assertion whose function is to state the general ground of the argument, and the assertion whose function is to state the particular application of that general truth. Each of these without its counterpart is ineffectual in argument and so devoid of 'meaning,' and so devoid of existence as an *assertion;* the major without a minor is 'empty,' the minor without a major is 'blind'. The former corresponds to the theory which helps to give a fact its meaning, the latter to the fact which helps to give a theory substance. Facts and theories (however inseparable from each other) are the whole material out of which arguments are woven. In order to justify a conclusion we must appeal to facts (*i.e.*, to supposed facts), but since, even where the facts are admitted, such an appeal may be irrelevant, something more than the bare fact is needed—namely, assurance of its relevance for the purpose. But what do we mean when we claim that a fact—say, the fact that smoke is rising from the haystack—is relevant to the proof of a conclusion —say, the conclusion that the haystack is on fire? We always mean that in other cases, *analogous* to the one before us, a similar fact has been known to justify a similar conclusion. We mean that the fact appealed to does not stand alone, is not entirely *sui generis*, but belongs to a class of facts whose causes and effects are known,—known sufficiently for the purpose of our assertion. In this way we refer to causal theory whenever we use a 'fact' for proof; and without such reference the fact would have no argumentative value. Similarly, in the absence of smoke perceived, —smoke taken as fact—our perception of the causal relation between smoke and fire is barren. Fact and theory, taken together, are effective; either by itself is null. A rule or principle that can never be applied in particular cases, and particular cases that are not cases of a general rule, are each equally incomplete,—at best are waiting for a future (a potential, not actual) meaning, purpose, and value. The

[1] *E.g.*, *major* and *minor premiss;* or *inferential* (or *conditional*, or *general*) and *categorical* (or *predicative*) assertion.

only use of any fact is to be connected with some generalisation; the only use of any generalisation is to be connected with particular facts.

If we were to define the two kinds, *inferential* and *categorical* assertion, as above, any 'proposition' may exemplify either kind, by being put to either use; but only during such use. What are commonly called 'singular propositions,' for instance, may be made to serve the purpose of major premisses with perfect ease. A sentence, that is to say, with a singular name (even a proper name) as its 'Subject,' may be used to make an assertion which is in its purpose purely inferential. Take the case, for instance, where the fact of reaching a certain station convinces us that we are near the end of a journey. The sentence 'Kentish Town is near the end of our journey' would, I suppose, be commonly classed as singular; and yet, in connexion with the minor premiss 'Here is Kentish Town' the *assertion* becomes inferential. It is a grammatical accident that we use the categorical form of sentence, instead of saying '*If* this is Kentish Town, then,' &c.

One result of our view is that a sentence, taken by itself, never declares its logical character except in a rough and provisional way. An assertion only declares its character because no such thing as an independent assertion exists, any more than an independent *term* (as contrasted with *word*). As soon as there is meaning at all, there is the polarisation of thought into major and minor premisses. Any given assertion—any understood sentence if it asserts, and is not merely truistic—may be regarded, at our choice, either as itself a conclusion, that is to say as the combination of a major and minor premiss, or as forming one of the premisses out of which a new conclusion follows. When regarded as itself a conclusion, its logical character is not yet declared; it may be put to either use in the future. It is only when and while it is itself a premiss that it has any logical character, in this sense, at all. It is thus only in 'promise and potency' that unattached inferential or categorical assertions can be said to exist. Their actuality begins with their mutual dependence.

Let us next ask what becomes of the division into affirmative and negative propositions. Every assertion, we must remember, may be regarded as giving either the answer 'yes' or the answer 'no' to a corresponding question; and it must also be remembered that any question admitting of such an answer is one of a pair of questions ('contradictories') such that if one be answered 'yes,' the other must

be answered 'no,' and *vice versâ*. Hence, no assertion is more affirmative or more negative than any other. This need not, of course, prevent one recognising to the full the practical difference between affirmative and denial in certain cases,—a difference in definiteness of assertion. But we cannot make exactly the use that is commonly made of the distinction.

As regards *universal* and *particular* propositions, this distinction becomes absorbed in that between the acceptance and the rejection of a proposed inferential. Apart from a system of sentence-forms, we do not want to know whether a proposition is 'universal' or 'particular' for any other purpose than that of knowing whether it has the energy to serve as a ground of inference when it meets with a relevant fact, or whether (being a mere denial of an opposite ground of inference) it remains neutral until it can be made more definite and assertive.

Terms are arrived at by analysis of assertions; we cannot think of terms as being taken separately and coupled together to form an assertion, though of course words are habitually thus coupled together to form a sentence. But the term is an abstraction from the assertion, and takes its whole character from the purpose it happens to serve in asserting. Major and minor premisses (or inferentials and predications) divide into terms differently; the former into *antecedent* and *consequent* (or *sign* and *signification*), related to each other so that, given A, C is asserted to follow,—or, as it may sometimes be conveniently regarded, A is asserted to *indicate* C; and the latter into *Subject* and *Predicate*, related to each other so that S is asserted to belong to the class P,—or, as it may otherwise be expressed, to have the attributes essential to that class.

Every term is thus either S, or A, or C, or P, in some assertion; and in each of the three latter usages it is *general*, or *predicative*, in character; while, when used as S, it is either *proper* or *quasi-proper*,—does not require definition, in order to serve its purpose. 'Reference-name' would be a convenient technicality for a word when used as the S term of a minor premiss. It does not matter whether such word denotes an individual, a class taken collectively, or a class taken individually. During the time that an assertion is a minor premiss, its S does not require definition in order to serve its purpose.

Next, let us try to see what occurs when a mind which is full of the notions above sketched out looks through an ordinary text-book of elementary logic. The chief result is

that short work is made of most of the puzzles that are wont to confuse the student and to lead him at times to shake the teacher's confidence with troublesome questions. I will select only a few of the best-known of these, in illustration.

(1) *Are abstract names general?* In order to be 'general,' a name must be descriptive, —else it has no connotation and therefore cannot be "correctly affirmed, *in the same sense*, of each of an indefinite number of things, real or imaginary". But a name becomes descriptive only by being used to describe—*i.e.*, used as P in a predication, or as A or C in an inferential. And, passing over the difficulty[1] (just here irrelevant) of distinguishing in practice between abstract and concrete names, it is plain that in whatever way 'abstract' names be defined they may be used for any one of these purposes, and also as S in a minor premiss. The assertion expressed in '*Familiarity breeds contempt*,' for instance, may be either major or minor premiss. Hence this question becomes a real question no longer; does not admit of a choice between 'yes' and 'no'. Abstract names, like all other names, *may* be general,—are general when they happen to be so, in fact.

(2) *Are proper names connotative?* If connotative means descriptive, then all 'proper' names, when used as P in a minor premiss—*e.g.*, in the instance given above 'Here is Kentish Town'—become connotative.[2] If, on the other hand, a proper name be *defined* as "given merely to distinguish an individual person or thing from others," and its application as being "independent of any special attributes that the individual may possess," then 'proper' names are defined as non-connotative; *i.e.*, we must find out first whether or no a given name is connotative, before we can say whether it is a 'proper' name.

(3) *Verbal and Real Propositions.* When we remember that all distinctions in Logic are abstract, we shall regard much that is commonly written about verbal and real propositions as illusory and confusing. The use of this particular distinction is mainly in connexion with the ques-

[1] The distinction between abstract and concrete names, when defined as that between the names of *attributes* and the names of *things*, is only a rough distinction until we are in a position to define 'thinghood' perfectly. By a perfect definition is here meant what I have elsewhere (*Distinction and the Criticism of Beliefs*) called an 'applicable' one; a definition such that by means of it we can decide on which side of the line any actual specimens presented to us should be placed.

[2] The connotation (so far as the purpose of the moment is concerned) being given by the major premiss.

tion as to the material truth of any given conclusion. Is either premiss 'merely verbal'? Then the conclusion is so too. Are both premisses 'real'? Then so is the conclusion.

A perfect (or applicable) definition of real and verbal propositions cannot be found; in practice, verbal propositions cannot be distinguished from real ones, except in a rough and provisional way. If we take some sentence like, 'Homer wrote the Iliad,' or, '7 and 5 are 12,' apart from all context, and affirm positively that it is 'verbal,' or on the other hand 'synthetic,' we forget that, whatever may be true of sentences, assertions get their character from their use. It is for the assertor to explain, when called upon, whether his assertion is intended as a mere postulate or not; in the absence of such explanation, it may be either postulate or doctrine,—though of course there is often a strong presumption in favour of one or the other. For instance, I find it difficult to imagine a case where the sentence, 'a triangle is a three-sided figure,' could be used to express a 'real' assertion, or where the sentence, 'Brutus killed Cæsar,' could be 'verbal'. But all that we are here concerned to notice is that no rule can be given for distinguishing, in doubtful cases, verbal from real assertions, unless or until we can get a declaration from the assertor himself. The same form of words—say, 'a straight line is the shortest distance between its extremities'—may be used either as a postulate of meaning or as a statement of fact.

(4) Next let us look at the doctrine of *Conversion*. Faulty Conversion, as every one admits, implies a mistake as to the meaning of a sentence. The fallacious reasoner assumes, for instance, that the sentence, 'All S are P,' *means* that 'All P are S'. It is plain therefore that rules of Conversion are rules for the correct interpretation of *sentences;* the 'legitimate converse' of an *assertion* is only the same assertion (where meaning and assertion are one) though differently expressed. But instead of stopping at this negative result it may be worth while to go a little further, and notice that when the machinery of *Barbara, Celarent*, &c., is discarded, the practical need for rules of conversion even of sentences almost disappears. All we require to remember is that in interpreting sentences it is generally unsafe to assume that the terms can simply change places in regard to the relation between them. A good many relations, of course, like *equality, cousinship, nearness*, &c., admit of simple conversion, but precisely those two relations—indication and predication—which rise into chief importance as soon as we distinguish the premisses on which a given

conclusion rests, do not admit of it. If the terms are simply transposed, the relations must be twisted round ('indicates' into 'is indicated by,' or 'is' into 'includes'); if the relation remains unaltered, both terms must be changed into their contradictories.[1] It should further be noticed that, under this view of the matter, the same rule serves whether the proposition answers 'yes' or 'no' to its question. For instance 'X indicates Z' converts into 'Non-Z indicates non-X,' and 'X does not indicate Z' converts into 'Non-Z does not indicate non-X'. (This latter pair are often more conveniently expressed as 'Some X are not Z,' and 'Some non-Z are X'.)

(5) *Predication* and *Existence*. This group of difficulties also becomes less important or puzzling when we keep assertion in view, rather than sentence. The question is sometimes raised whether, if we say that 'All S are P,' we imply that any S exist. Our answer would be that (whatever be meant by 'existence') though a given assertor might intend to imply it, he certainly need not do so. In the case of major premisses the conditional (or hypothetical) character of the assertion lies on the surface for all to see. Whatever implication of existence the assertor may intend is beside the purpose of that particular use of the assertion. In fact, Grammar often chooses the hypothetical form of sentence for a major premiss. But in the case of minor premisses the existence of S is so commonly implied that the question whether it is *necessarily* implied becomes much more plausible. However, the process of reducing opponents' assertions to absurdity plays a considerable part in argument, and for that purpose the real existence of S is often not implied, even in minor premisses. Wherever, in fact, our conclusion is that S does not exist (*e.g.*, 'miracles do not happen'), our minor premiss cannot imply an opinion of *our own* that S exists. There may also, perhaps, be other cases where the minor premiss is a 'verbal proposition'. No doubt Mill was right in saying that 'real' propositions—so far as they predicate—do imply the real existence of S. But he seems not to have been fully aware of the difficulty of saying offhand which propositions are real and which are verbal.

Again, the fact of an assertion being 'particular' does not

[1] There are perhaps many cases where Grammar would say that a term had no contradictory. In the case of 'proper names' it must be very seldom that Logic would not be content to abide by Grammar in this respect; but whenever we feel how convenient a negative name would be, which is not at present in use, we begin to rebel against Grammar.

seem to prevent its being verbal and so non-existential. We can therefore only agree with Dr. Venn's views to a limited extent. Particular assertions, being mere denials [1] of indication, can never be anything but minor premisses,[2] and are therefore on the whole more likely to imply existence; but there seems no reason *à priori* why the 'Some S' that are spoken of should not be conceived as merely 'Some so-called S,' with the tacit mental reservation that no rightly-called S exist. Dr. Keynes (*Formal Logic*, part ii. ch. viii. § 106) says that unless particular propositions are made to imply the existence of S, the doctrine that A and O, or E and I are contradictories no longer holds good. Here I cannot exactly follow him; for, of the two assertions (1) that some (so-called) X are not Y, and (2) that all (so-called) X are Y, one or the other must surely be false? Of course I admit that the assertions expressed in the sentence 'If anything is *really* X it is Y,' and 'Some (so-called) X are not Y,' fail to connect directly in opposition; they are, in fact, related as major and minor premiss, and give the conclusion 'Some (so-called) X are not *really* X'. But that conclusion, which looks self-contradictory when the 'so-called' is left tacit, is reached for the very purpose of showing that there is a contradiction between the premisses—that one premiss or the other must be false.

One further remark on this subject seems in point. 'Predications,' as contrasted with inferentials (*i.e.*, minor premisses as contrasted with majors), must always imply the existence of S, except where they are verbal; for to predicate anything whatever (except non-existence) of a subject is to predicate more than its mere existence. Existence (or non-existence) is the least definitely descriptive attribute that can be predicated, and is the foundation of all other predicates.

(6) *Syllogism* becomes a much less complicated operation when analysed into assertions instead of its sentences. 'Rules' then become almost superfluous, in practice. If, however, we wished to draw up a set of rules, they might take some such form as follows:—

1. Without a *valid* [3] conclusion, there is no Syllogism.
2. Every valid conclusion depends upon an assumed fact,

[1] See above, p. 151.

[2] This holds true in spite of the fact that particular *propositions* become 'major premisses' in three moods out of the nineteen recognised in the traditional Syllogism.

[3] *I.e.*, syllogistically valid,—not necessarily *true in fact*.

or group of facts (minor premiss), and an assumed ground of inference (major premiss).

3. The minor premiss is a predication, and, except in one case (see Rule 5), is a predication about the S of the conclusion.
4. The major premiss is an inferential, asserting (except in the one case just mentioned) that the P of the conclusion is indicated by the predicate of the minor premiss.
5. The case above referred to occurs where the A and C of the major premiss are themselves assertions. Here A, asserted categorically, becomes the minor premiss; and C the conclusion. [This is the old 'hypothetical' (or 'conditional' or 'disjunctive') Syllogism.]

(7) *Inductive Logic.* The confusion between assertion and sentence is apparently here of very little direct importance, so far at least as Inductive Logic may be truly called the logic of *facts*, rather than of assertions. But at any rate a similar confusion is apt to obscure our view, namely the confusion between a *fact* and a *truth*. The relation between truth and fact is precisely analogous to that between assertion and sentence. *Ideally*, fact is truth (*i.e.*, is undeniable), but every *actual* 'fact' has theory mingled with it; and theory cannot be contrasted with fact, in idea, unless it be regarded as essentially deniable. Hence, if inductive logic be taken as concerned with the proof of theories by means of fact, it seems at first to lie open to easy caricature, as aiming at the proof that something deniable is undeniable, by means of something else upon which that remarkable process has already been performed.

This, however, it may be urged, is merely a verbal difficulty, and may be met by judicious interpretation. What one really means, it may be said, is that inductive logic is concerned with the proof of the more deniable by means of the less deniable. And since, in any case, it is not 'truths,' but beliefs (or assertions) about truth, which are deniable, this means that inductive logic is concerned with the proof of disputed assertions by means of assertions which are less disputed, or not disputed at all. But then it does not appear what difference, after all, can be found between inductive and deductive logic.

Would not a more useful way be to conceive inductive logic, as concerned with the proof of major premisses (or 'inferentials')? Theories are only objects of interest in connexion with the facts they are supposed to explain; and

for a theory to explain any fact is to act the major premiss to its minor. Of course the material truth of a minor premiss (or 'fact') is also an object of interest, but such truth is only proved so far as the 'fact' can be explained,—*i.e.*, a major premiss found for it, itself acceptable as being materially true.

The manner in which an inferential is proved (*i.e.*, rendered acceptable to some mind), in practice, is by comparing conclusions deductively drawn from it, by the help of an accepted minor premiss, with some other accepted fact. By means of the contradictions so reached, we are enabled to revise and correct our inferentials from time to time; we learn how to state them with closer approximation to the truth. It is probably never the case that an inferential which is at all generally used is wholly without material truth; but they are extremely apt to be too broadly and vaguely conceived,—partly through an imperfect knowledge of facts, partly also through the mere influence of concise (and therefore vague) expression.

What can inductive logic do for us in improving our methods of testing the truth of an inferential? So wide a question cannot satisfactorily be answered within the limits of the present article, but there is room for one or two general remarks bearing upon it. It is much more easy to see what inductive logic can *not* do for us than what it can do. Its function, as here viewed, will in any case be (like that of deductive logic) negative and restrictive only; it will make us aware of the risks we run in accepting any given major premiss as true. And its method will be the analysis of notions which are commonly used in inference. For example, it may begin by analysing for us the notion of *essential* resemblance and difference, at least until we are finally purged from the belief that resemblance and difference can (except for the roughest purposes) be regarded as varying in *amount*, or *degree*. After the event, of course—after we have decided which details are important and which are unimportant—we can talk of greater and less resemblance, with the utmost wisdom; but our guide in all inductive inquiry, *before* we can regard it as finished, must be the notion that, until the contrary is proved, no detail however apparently trifling can be safely disregarded. In this respect perhaps the devotee of common-sense, or the beginner in philosophy or science, may hope to get some help from inductive logic. But to the specialist, the artist, and those who are practical in deed and not merely in name, all such analysis will probably give only stale information.

Of misleading influences still at work a chief source is the

very neglect to distinguish between the *ideal* and the *actual*, which we have already noticed in the case of assertion and sentence, truth and fact. It is this that leads us to draw up 'inductive canons' whose main practical effect—so far as we ever consciously use them—must be to hide from us all details of the real operation (namely, penetrating observation of fact, at once imaginative and critical) on which success depends. General rules for the interpretation of 'fact' inevitably suffer from this radical defect; they can only tell us how to perform the easiest part of the process, —the part which may be performed alike by minds that reach a true and a false conclusion. So far as we ever misinterpret facts, it is because we have proceeded on one of these general rules too hastily. Not that such rules need be *untrue*, or liable to exceptions—Mill's, for instance, were not—but that they profess to give advice, and yet such advice is only true so far as it is truistic. In order to apply them we must make certain assumptions; and the really important problem is always how to get a sufficient warrant for making those assumptions in the given case. Taken ideally, they are true; taken actually they are, *as general statements*, false and misleading. But perhaps it is needless to dwell further on this particular form of the error. Inductive canons have lately lost much of their authority.

Before this point is reached, it will perhaps have occurred to the reader that we have occasionally come very near the invention of new technicalities. Still, I think the worst of the charge may be avoided by keeping our minds open to receive any other expressions that may better serve to fit the thoughts. When we object to new technicalities, it is commonly not their mere novelty that is the chief cause of offence, but the fact that they do not happen to be just the novelties we ourselves should have chosen. That is one reason why I think it really better not to aim at present directly at the improvement of logical terminology, but rather at understanding the reasons why some reform or other is needed. The great thing is to fix our minds on the portions of truth that are apt to be hidden by the present received terminology. In doing so we must to some extent make use of new ways of expression. But these need never bind us more than we choose to be bound by them. For words are only instruments, and we shall get most out of them by keeping them free to change and improve. Words are freest when most tacit, and hence old technicalities used with tacit criticism may be as effective as the best new system that can be devised.

II.—THE NATURE AND AIMS OF PHILOSOPHY.[1]

By Prof. Henry Jones.

At the present moment, as philosophers would themselves acknowledge, there is no theory that either obtains or deserves unquestioning confidence. All attempts at re-presenting the unity of things have failed.

> "A mass, keeps flying off, fining away
> Ever into a multitude of points,
> And ends in isolation, each from each."

Unprejudiced observers—if ignorance, more or less complete, can ever be unprejudiced—who contrast the long catalogue of defeats sustained by the philosophers and the shattered condition of their ranks to-day, with the solid and advancing conquests of the natural sciences, have very naturally concluded that philosophy is seeking by a doubtful method an unattainable goal. Philosophy has fallen upon evil days, if not amongst evil men.

The sad picture which Hume drew of philosophy in his day, represents with much faithfulness its condition in our own. "Principles taken upon trust, consequences lamely deduced from them, want of coherence in the parts, and of evidence in the whole—these are everywhere to be met with in the systems of the most eminent philosophers, and seem to have drawn disgrace upon philosophy itself. Nor is there required such profound knowledge to discover the present imperfect condition of the sciences, but even the rabble without doors may judge from the noise and clamour, which they hear, that all goes not well within."

I concur with the rabble as to the noise and clamour, but I dissent from the conclusion it draws from them. In fact, I remember with some satisfaction that it is the rabble which infers from the noise and clamour that all goes not well within. The wise from the same premisses will draw the opposite conclusion. They know that there is the vigour of life in a philosophy which excites the clamour of disputants. It is the philosophy which has sunk into silence that is dead. All truth is vocal, and continues to clamour till it is purified from the discordant elements of error. Like virtue, and all *life*, spiritual and natural, truth

[1] An address delivered at St. Andrews in October, 1891.

is essentially combative in nature. It continues to strive till it lifts man to its own level and becomes his permanent and peaceful possession. The error of the rabble lies in expecting that this sphere of knowledge can ever be other than the arena of combatants. They forget that a philosophy which has become a tradition, like a theology that has hardened into dogma, has lost all its potency.

But the common error is quite natural. People have been led into it by the philosophers themselves, who have not only striven to erect systems whose validity would never more be doubted, and which would stand fixed and serene outside the changing show of human affairs, but have also assured the world that they have accomplished this task. Descartes in his *Principia* boasted that "There is no phenomenon of nature whose explanation has been omitted from this Treatise". Pretensions of a similar character were set up by the cautious David Hume. The most modest Immanuel Kant thought that he had left little more for mankind than the task of filling in the details of his system. What shall be said of the more generous vaunts of Kant's successors? "Out of the turnings round and round inside," Kant thought that through his effort there would come 'that straightforward world-advance' that we all want. He had "substituted the certainty of scientific method, for that random groping after results without the guidance of principles, which has hitherto characterised the pursuit of metaphysical studies". This discovery of a valid method has been too often confused with the establishment of an ultimate and final system of philosophy.

Now I venture to think that no such system exists; and, what is much more, that a valid, ultimate, fixed system of philosophical doctrine is radically impossible. Indeed part of my present task is to show that to expect such a consummation to the philosopher's endeavour betrays a fundamental misapprehension of the nature of the metaphysical science. I do not believe in a last philosophy, any more than in a last poet. On the contrary, he who expects finality in the region of philosophy, and condemns its votaries for not attaining it, condemns it by reference to an unreasonable criterion and an impossible end: nay, condemns it for that which is its highest virtue.

In order to show this it is necessary to form some conception of the true end of philosophy. A complete definition of that end is as impossible as a complete definition of Goodness. I should describe the metaphysical science, in the spirit of the ancient philosophers and without sinking

any of its ancient pretensions, as the reflective reconstruction of the life of man. It is a process rather than a dogma, a process whereby man lives over again in thought the experiences of his theoretical and practical activities. It is our way, and our only way, of lifting into the clear light of thought those principles which have been acting within us and in the events of our times with the blindness and imperiousness of instinct. It is the wisdom of old age turned back in placid contemplation upon the fervid activities of youth, gathering up the meaning which was hidden during the strife and conflict and treasuring it for a better life in the future. It is not easy to lay too much stress on this truth that the office of philosophy is primarily reproductive and only secondarily creative: that, as has been said, it 'paints its grey in grey and cannot make the old young again'.

> "Therefore, I summon age
> To grant youth's heritage;
> Life's struggle having so far reached its term.
> . . . . . .
> "Youth ended I shall try
> My gain or loss thereby;
> Leave the fire ashes, what survives is gold:
> And I shall weigh the same,
> Give life its praise or blame.
> Young all lay in dispute; I shall know being old."

Now, as philosophy is the reflective interpretation of human experience, it must accept the laws of experience as its own. Experience is its starting-point and its whole datum, from which alone it derives both its content and its method. Philosophy never did and never can construct a world from an empty thought by means of deductive logic. It is questionable, even, if any great philosopher ever fell into the error of thinking that he proceeded by this high *priori* road. It is certain that modern philosophy seeks no fulcrum outside the world whereon to base its engines. It derives all its force from the intimacy and inwardness of its relation to experience. Like every valuable theory it is explanatory only; it is ruled by the facts which it explains; it *is* the fact rendered intelligible, with its potencies laid bare. The fact breaks into the true thought, as the plant bursts into flower. Living thought is the means which the fact employs for manifesting its own nature. It is the relation of mind and the bodily organs to the physical waves which converts the latter into sounds and colours. It lifts them, so to speak, into a higher power; but it lifts

them into a higher power only because they are intrinsically capable of entering into relation with physiological and psychological conditions. The lower, or physical, is 'organic to' the higher, or intellectual. Higher and lower are parts of one whole, and therefore known in their reality only when known in their relation. There is no error of abstract thought more mischievous than that which ignores the activity of thought in the sphere of fact, or that of fact in the sphere of thought, and makes science and philosophy exclusive and rival forms of knowledge. Thought never invents, it only discovers. It starts from what already is, and it only gives to that which is the means of expressing itself more fully.

This is not the place to dwell upon the difference, within the deeper identity, between science and philosophy. Nor do I pause to show in what way philosophy reacts upon the results of the ordinary and scientific consciousness. I only wish, in the first place, to direct attention to the fundamental identity of all thinking activity, and to emphasise the immediate dependence of all thought upon its data—a dependence so deep and immediate as to make the severed elements nothing but unreal abstractions. Philosophy, indeed, as reflexion upon experience, is thought engaged upon thought. But it is a hasty conclusion to conceive that the thought it interprets is empty thought. Empty thought, evolved purely from within, is impossible, and neither philosophy nor any other science can possibly be engaged upon it.

Now if the task of philosophy is to interpret experience, and if experience ordinary and scientific as the datum of philosophy gives it both its content and its law of procedure, we may ask further whether there is any law or principle of human experience which we can agree to regard as fundamental, and therefore as a valid starting-point. I do not ask for a starting-point which is absolutely and unconditionally valid. Indeed, this lecture will fail in its main purpose if it does not show that such an absolute and unconditional point of departure is impossible. The philosophy of our day distinguishes itself from the pre-Kantian theories in nothing more broadly and significantly than in the fact that it seeks certainty not at the beginning but at the end,—were there any end. Instead of setting forth from an irrefragable datum like the Cartesian 'Cogito ergo Sum' or from a direct, immediate, authoritative testimony of consciousness, it starts from the hypothetical and moves through doubt. It seeks stability not in its foundation but

in its key stone; not in an isolated fact, but in a completed system. Or, speaking more strictly, its test of truth is complete organisation and not any mechanical and rigid relation of part to part; and, in this respect, it labours under the same difficulties, is liable to the same suspicion and claims precisely the same authority as Natural Science.

In seeking for a starting-point we, therefore, only seek 'a working hypothesis,' that is a conception which, while lacking all apodeictic certainty, commends itself to our notice by the range and the clearness of the light it seems to throw on the manifold data of our experience. Now, I think I find such a valuable, hypothetical starting-point in the conception of human experience as a process of growth. I believe that while there may be some who would deny that 'the world is growing better' and who think that in doing so they are rejecting the doctrine of evolution, neither they, nor any others, are at present able really to escape the evolutionary point of view. No one now denies the continuity of the life of mankind, even if that continuity points in the direction of decay and degeneration. All the sciences, on the contrary, combine in demonstrating with even fuller detail how in language, art, science, morals, each generation gets its starting-point from its predecessor. History is not a series of leaks. Whether the golden age be in the past or in the future it is at least certain that in the large life of man day is bound to day by 'natural piety'. Whether it be for better or for worse, the product of the labour of centuries lies between us and the crude needs and delights of the ages of barbarism.

So deeply is the thought of the present age impressed with the continuity of human experience that it is prone rather to forget the other aspect implied in its history. We forget too often that no generation, or individual, can enter upon its inheritance from the past except by making it its own.

> "Was du ererbt von deinen Vatern hast
> Erwirb es, um es zu besitzen."

There is a sense in which human experience begins again *de novo*, not only with every age and epoch, but with every individual. Every man, thinks Emerson, is a new incarnation, a fresh experiment in the world of spirit, a new attempt at realising the true and the good. Knowledge cannot come to any one by bequest, although it is a vast gain to breathe in youth the air of culture; character cannot be inherited, although it is an advantage of incomparable

value to have a stainless descent, and to be born a citizen of a good state. Every individual must, after all, front the world in his own might, be it great or small, and gain from his conflict with it such a spiritual possession as he can conquer in his own strength. Persons are the most solitary things in the world, even though they are capable of the deepest communion. Although they need all the world whereby to realise themselves in knowledge and virtue, yet each of them is as spirit, a world to himself, his own beginning and end and destiny. In fact it is the characteristic of knowledge and virtue, of all spiritual possessions that they must be acquired anew by every age and every person in an age. Nor is this truth nullified by the fact that accumulated potencies are vested in society. For it is *only* potencies that are transmitted. The utmost that one age can give to another is the raw material, which ever demands to be elaborated over again. The movement onward of mankind is thus a movement that is perpetually turning back upon itself and beginning anew. The process of human experience passes through the continual, though only partial, failure of the individual, and like all that is living, it persists by continual reconstruction.

Now, if this be the law of the fact which philosophy seeks to explain, is it not evident that it must also be the law of the movement of philosophy itself? If mind ever gathers itself into new centres and maintains itself anew in each man as against the world, reconstructing that world in thought and subordinating it to the uses of spirit, must not philosophy do the same? If so, then to the question, 'Which, then, remains of all the philosophies?' we may answer with Schiller, 'None, but philosophy itself will remain for ever'. It, too, must die to live.

The doubt which has gathered round Metaphysics, like many other difficulties which meet those who labour in the Sciences of Man, springs from the attempt to treat a moving, changing, living, growing fact from a fixed, static point of view. It is gratuitously assumed that of two alternatives one must be true, whereas fixed alternatives will yield no truth in the sphere of life and mind. A final and ultimate account, an absolute philosophy, is demanded of an object which cannot remain what it is without ceasing to be at all, which is not only always progressing but always changing as a living organism changes. For there is no mere external aggregation in the history of human experience. Every step forward is taken through concretion, in which the past is taken up into the present. Its history is a

continual synthesis of new and old, in which both new and old interpenetrate and the whole is renovated in every part.

Now it follows from this view of human experience that Philosophy which endeavours to reconstruct it by reflexion must itself follow the same law of evolution. A system of Philosophy must fail if it is faithful to its datum; it must perish with the life it explains, though it perishes only *as* that life does, namely, in such a way as to enter into the larger life which succeeds it. In the fact that system after system fails, becomes too narrow, like many a moral and religious creed, to give adequate expression to the expanding life of man I would find one of the conditions of the possibility of the vitality and permanence of philosophy. If it is true on the one hand that the failure of systems is not of itself enough to secure the success of Philosophy, it is also true on the other that a system which does not fail, a creed which is fixed is dead.

But it may be objected that our argument proves too much, in so far as it implies the continual failure of every form of systematic thought; whereas there is a definite contrast between Philosophy and the sciences, between the continual retrogression of the former and the steady onward movement of the latter.

An attempt has, indeed, been made to meet this difficulty by introducing the same law of failure into the history of science. It has been indicated, not without truth, that even the proud structure of the natural sciences has been erected with the broken columns of past experiments. Newton's *Principia*, it is argued, is no more the Science of physics; Euclid's Elements is not the Science of geometry: philosophy as regards its history and development does not differ *in genere* from the body of the Sciences. Nevertheless, I do not think that the philosopher has a complete right to use this weapon of defence that lies so ready to hand. On the contrary, I must confess that the Sciences, and especially Mathematics and Physics, have, to use the words of Kant, 'found a sure course,' and 'admit of an indefinite advancement': while, "In Metaphysics, reason seems perpetually to come to a stand, is compelled to retrace its steps and abandon one path after another". In this arena, "No victory was ever crowned with permanent possession". This contrast is, in the main, valid; and, while no advancement in knowledge can come by mere aggregation, the sciences actually have manifested a power of continuous movement which Metaphysics cannot parallel. Helmholtz or Thomson can enter into the labours of Newton

and even of Euclid; the edifice grows in grandeur just because the old foundations are sure. Twice two is always four and in Euclidean space straight lines do not enclose a surface. But what philosophical doctrine has this permanent validity? Hume was unable to accept the result of Locke's reflexion, Kant rejected the discoveries of Hume, Hegel reconstructed the whole system of Kant, and his own system looks to-day as if it were crumbling into dust beneath the blows of the minor critics. Why is the first movement of the masters in philosophy always destructive and the continuity of their labours so concealed that its very existence seems doubtful?

I believe that we may get a less prejudiced, and perhaps a truer answer to this question if we direct it against another form of activity, one whose high worth no one doubts even although it, like philosophy, is always turning *back* to the beginning. I refer to the Fine Arts. Their history, like that of philosophic systems, is a record of apparently abrupt phenomena. No one can give the genealogy of the poets. They are all Melchisedecs. We cannot discern the law of the succession of Chaucer and Spenser and Shakespere and Milton.

These great figures rise precipitously from the dead level of ordinary human life like mountains from the plain, and while the Art of Poetry grows greater in their hands no one of them accepts his task from the hands of his predecessor. Poetry no more grows by gradual expansion than philosophy does, and poets no more than philosophers continue the work of those who go before them. No poem begun by one author can receive perfection from the skill of another. There are fragments left by poets which will remain fragments to the end of time.

'Thy great Campanile is still to finish.'

We do not even expect this kind of continuity in the history of Art. Its growth takes place according to no simple law but by a series of surprises. In fact there is the same kind of contrast between the growth of Art and of Science as there is between that of Philosophy and Science; and if we can explain the former we may go some way towards understanding the latter.

I believe that the reason of this contrast lies in the simple fact that we can connect parts together, but not wholes. Art in all its forms deals with wholes; the unity of its products must ever be in the foreground, whether the elements it happens to combine be few or many. Harmony

is its first law. There must, of course, be unity in the case of the sciences also; no fact has value or significance for them except in so far as it illustrates and embodies a colligating hypothesis. But, in them, the unity is more or less latent, operates, as it were, from behind, and exists, not for its own sake, but for that of the details, the facts or events it explains. The harmony of whole and part is incomplete in the sciences, the reconciliation of law and fact is imperfect. While the work of art sustains the detail in the whole, the scientific idea uses up the particular, which has no value for its own sake but as a mere illustration or example of a law. The great pictures in a gallery of art are altogether unlike the series of phenomena explicable by one scientific law. Of the latter each reflects lights upon the others and is valuable only in relation to the others. They are only links in a chain.

But every work of Art is complete within itself. The poetic idea from which it springs has the potency of a living principle which harmonises and vitalises its parts, and so rounds back upon itself as to exclude the extraneous and make the beautiful object stand alone. An object of art, in a word, is the full incarnation of its own law, like a free being, and this is why Fine Art is free. Its reason lies entirely within itself, and to find its conditions or causes is to show that it has come by imitation and not by inspiration. But the work of the Natural Sciences is to find the conditions of one object in another. Their character partakes of the self-externality of their material, and their movement is that of space and time, and their contents essentially incomplete and proceeding by aggregation. This is why one scientific man can, to such an extent, *add* to the work of his predecessor. The physicist of to-day can go on in the line of Newton, and the astronomer in that of Copernicus. But the poet or painter must begin his work from the beginning. All that he can inherit from his predecessors are the subtle suggestions which can speak scarcely more than the language of the emotions, and which can be interpreted only by a spirit which is itself poetic. In fact every poet must look at the world from a new point of view; his touch must be creative; he must strike a new note; add a new string to the lyre of Art; the beauty he reveals must be as unexpected as the new colour in the clouds of the closing day. Hence it is that the surprises of Fine Art, the absence of any simple line of continuity in its products, or of the sameness of mere heredity in its votaries, instead of proving it a failure are the very essence of its success. No worker who

does not begin again at the beginning, make the world new by putting it in a new light, concealing by complete assimilation his debt to predecessors, can be a true Artist.

Now can a similar defence be made for Philosophy? Is the criterion of its success the continuity of its systems or their discontinuity. Should it grow, comparatively speaking, by external accretion or by a series of new creations? Is it, in this respect, like Science or Art?

Philosophy seems to me to partake of the character both of the Sciences and of the Fine Arts; it combines the fundamental characteristics of both, *viz.*, the analytic movement of Science and the synthetic impulse of Art. The sciences confessedly deal with aspects and phases only, and never with wholes. They divide nature, which is one, into fields, and the investigators themselves acknowledge that their divisions are artificial. We require a multitude of Sciences to explain even the simplest object. Geology deals with one of its aspects, physics with another, chemistry with still another. No science pretends to give a complete account of it, but to reveal from an abstract point of view one set of its relations. The Sciences have no direct vision of the unity of the object of investigation, far less do they endeavour to explain it in the light of the principle of the Universal Order which manifests itself in all the endless forms of being.

The objects of the Sciences are in this sense finite, and the finite is incapable by any repetition or multiplication of being infinite, *i.e.*, self-determined, or complete. "Content with tracing out the relation of finite things to finite things, Science never finds it necessary to seek for a beginning or an end to its infinite series of phenomena." Hence also the spirit of Science is essentially secular. "The world of finite interests and objects has, in the sciences, rounded itself as it were into separate wholes, within which the mind of the scientific man can fortify itself and live *securus adversus deos*, in independence of the infinite." Science is order in the parts, but anarchy in the whole. It is directly individualistic, and only remotely and unconsciously organic. There is the need, as Plato showed—a need now deeper and less difficult to meet than ever before—of a Science which shall unite the Sciences. We require an architectonic form of knowledge which shall unite the wings of the great structure that the sciences are building into one harmonious edifice, which shall relate them not only to each other but to the mind of man, the master-workman who impresses his own image on all things. In no age in the world's

history was there so imperative a demand for a form of knowledge which can restore to man the consciousness of the unity of the world in which he lives, and counteract the specialising tendencies of modern life which so limit and impoverish our thoughts and actions.

Now, that unity can be restored to man in two ways: by the imagination which gives to the universal a particular vesture, and where product is always, therefore, 'a noble lie,' and by the reason which gives to the universal a form adequate to itself. If we put the same thought in the order of history we may say that this unity is given by poetry, broken by science and restored by philosophy. The whole aim of philosophy is to articulate, by means of experience, one thought, and owing to the imperious demand for unity it is so like Art that it may be defined as Art made conscious of itself. Nevertheless, this consciousness of itself can be reached by philosophy only with the help of the sciences with their analytic processes. The understanding must come between the imagination and the reason. Art on its side always regards science as a foe. It resents its analytic processes, suppresses differences and antagonisms, and reaches the unity which gives beauty to its object by a method that is intuitional and in a mood which is saturated with emotion. But philosophy waits for the sciences, and must do so more and more. "The new philosophy," says Zeller, "must enter into closer relation to these sciences, avail herself of their results and their procedures and supplement her former all too-inclusive Idealism by means of a Sound Realism." Philosophy must be aware of the differences which Science reveals; it accepts with gratitude the sets of relations, the *aspects* of truth revealed by Science, and recombines them into a view of the world as a whole which is articulated and wherein the differences have free play. Its unity must come after criticism has done its uttermost; its affirmation, unlike that of imagination, must come *through* negations; its impulse towards unity must spring from the very negations and contradictions into which the abstract conceptions of the Sciences necessarily break. Nor has it any right to stop in its process of reconstruction till it is able to view the world in the light of a category which is at once the intensest unity and the source of the deepest differences.

This category is that of self-consciousness, as the history of philosophy shows. In other words, we are again brought to the conclusion that philosophy seeks to interpret the world by knowing man. It seeks to be, like religion, com-

pletely anthropomorphic, endeavouring to explain the world in the terms of the human mind. Its task is to apply the category of self-consciousness, as the physical sciences apply in their sphere the category of cause: Self-consciousness is the 'working hypothesis' of philosophy, as a glance at its present position will show. For, whether we be Realists, or Idealists, or Dualists; to whatever different degrees we hold that the world of real being has been retracted into thought and however differently we interpret the implications of self-consciousness, we all agree that our problem, our only problem, is to understand the nature of man's thought. Philosophy, in the hands of individuals, has, it must be admitted, often lost its way and asked foolish questions, such as whether the world be real or not, and whether we know it or not,—facts which *must* be taken for granted in order that there may be any problem to solve. Its true task, however, is to determine what sort of a world that must be which admits of being known, or what is the nature of the thought which is able to know the world. It seeks to comprehend the conditions under which man and the world, thought and thing, do, as a matter of fact, complete one another and enter into one harmonious whole.

Once it is recognised that the fundamental problem of man is man and that he is the key to the secret of the world; once it is adequately apprehended that we work within the limitations of our own thought and that there is no calamitous element in that fact, nothing that justifies us in condemning the world we know as a mere phenomenon and setting up over against it another world which has no qualities except emptiness and transcendence and unknowableness; once, in a word, we consistently regard the world as its own interpreter and man's thought as its finer spirit and essence, the apparent failure of philosophic systems will cease to trouble us. We shall, like Christian, find that the key which opens the gates of the Castle of Giant Despair lies in our own bosom. For the idea of self-consciousness gives us both the continuity and the abrupt new beginnings of human experience; and philosophy, in so far as it is faithful to this idea, manifests itself in the independence as well as in the sequence of systems of thought. It passes through the same process as the life which it explains; that is, it develops through successive systems each of which *must* be an organic embodiment of one principle, and, therefore, a whole which rounds itself upon itself and must, in this sense, be complete; just as the life of humanity is a life of lives, an organism of organisms. On this account,

Philosophy never is purely critical, or purely eclectic, or purely destructive, any more than a work of art is. Criticism, eclectism, refutation, to have any true philosophic value, must be themselves dominated by, and be the mere expression, which at the time happens to be more or less negative, of a dominant principle. It is only in this way that criticism and refutation can have a place in philosophy. For history shows us that there is no way of linking men's thoughts into the thought of mankind, or generations of men into a continuous humanity except by the dissipation of the individual. While links may be joined in a chain, living wholes must be assimilated in such a way that the earlier passes into the later.

The apparent failure of philosophic systems is from this point of view shown to be the negative process necessarily involved in the development of philosophy itself. Its true analogue is in the growth of civilisation—the expansion of the intellect of man and the improvement of his moral character. The pursuit of the moral ideal is not futile though no individual ever attains it, but at his best is only a temporary embodiment of some of its phases. We know that the inheritance of goodness is real, although every individual must begin to learn the good life at the beginning. Morality is always breaking down, recommencing, and nowhere do we find even in idea an absolute good. In a similar way though systems of philosophy pass away, philosophy itself remains as a witness to the expansion of the mind of man and the reflective expression of his growing life. We may say, if we please, that Plato failed and Aristotle, and Kant and Hegel, and we may safely predict the same kind of failure to the end of time. An absolute philosophy, in this sense, does not exist and cannot come to be till man ceases to be what he is, a being whose very life is strife and failure, and conquest through failure. We have no right to demand finality in an object whose essence is development and whose development is only realised in successive individuals each of which must begin his task at the beginning. In philosophy, art, and morality, fact is bound to fact not by the simple chain of causality whose beginning and end are beyond time and space and whose parts are within them, but the deeper identity and deeper differentiation of growing life. Systems of thought, poems, and moral characters comprehend their own beginning and end. In philosophy, art, and morality, man immediately expresses himself; his products are the direct manifestation of his own ideal of truth, beauty and goodness. In the

sciences, on the other hand, man's thought is subordinated to the material, exists for its sake, and partakes of the self-externality of objects in a world of space and time. Hence comes the possibility, comparatively speaking, of the aggregation of knowledge in the natural sciences; while in philosophy and art aggregation, repetition, imitation, cease to be possible just in the degree to which the thinker and the artist rise to the height of the demand of their subject.

In the succession of systems I find, therefore, a suggestion of the essentially human character of philosophy. It sits as close to man's life as art and morality, and its failure in the individual and success in the whole is strictly analogous to their failure and success. Each of these deeper forms of our spiritual activity are efforts of perfection, the ideals they seek are absolute; and all of them fail. But in spite of their failure, or rather by means of it, they expand with the growing life of man. Philosophy is asking the same questions to-day as it did in the time of the Greeks, as art is pursuing the same ideal of beauty and morality of goodness. Nevertheless I find it manifesting itself in ever richer forms, growing in complexity with the growing complexity of its material, and ever amidst the variety of the practical and theoretical interests of man remaining loyal to the idea of a principle of simplicity in things, and bearing witness, on behalf of the highest interests of thought, morality, and religion, to that unity which makes the world a Kosmos and a dwelling-place for man, whose life must be unbroken and whose mind must find itself reflected everywhere.

Who can now doubt that Socrates, Plato and Aristotle translated into perennial thought and saved for the ages which succeeded them the inner meaning of the evanescent life of Greece, which otherwise would have passed away like a beautiful transformation scene? Hobbes and Locke and Hume rendered intelligible to us the individualistic life of modern Europe, laying its fundamental principles bare, and they enabled us, thereby, to escape its limitations and to overcome its scepticism. The great philosophers who followed them, aided by the poets, set free a subtle power of organic reconstruction from which even modern Science is unconsciously deriving its inspiration and which is gradually re-interpreting for us the world of man. Their work will also pass away, but only when it is *understood*, and when it is understood it shall already have been made eternal by passing into the richer life of the future. Creeds and systems must die in order that religion and philosophy may live as the principles of simplicity and harmony in a world otherwise fragmentary and discordant.

III.—UNREASONABLE ACTION.

By Prof. Sidgwick.

In the present paper I wish to examine the conception of what I think it on the whole most convenient to call the "unreasonable action" of sane persons in an apparently normal condition; and to contribute, if possible, to the more precise ascertainment of the nature of the mental process involved in it. The subject seems to me one of great ethical importance: but I wish here to discuss it from a psychological rather than ethical point of view,—so far as the two are distinguishable.

The point is one which attracted considerable attention in Greek philosophy; since the cardinal doctrine of Socrates 'that every man wishes for his own good and would get it if he knew how' naturally brought into prominence the question 'How then is it that men continually choose to do what they apparently know will not conduce to their own good?' Accordingly the Aristotelian treatment of ethics [1] included an elaborate discussion of the 'want of self-restraint' (*ἀκρασία*) exhibited in such acts, considered primarily in the special case of indulgence of bodily appetites in spite of a conviction that they ought not to be indulged. The discussion, apart from its historical interest, may still be read with profit; but the combination of 'dialectical' and 'naturalistic' methods which the writer uses is somewhat confusing to a modern reader; and the *node* of the difficulty with which he deals seems to me to be rather evaded than overcome. In modern psychological and ethical treatises the question has, from various causes, usually failed to receive the full and systematic treatment which it appears to me to deserve; and this is the main reason why I wish now to draw attention to it.

I must begin by defining more clearly the phenomenon that I have in view. In the first place, I wish to include inaction

[1] I use this vague term because book vii. of the *Nicomachean Ethics*, which contains the discussion to which I refer, is one of the three Books which also form a part of the *Eudemian Ethics*; and as to the composition of these three Books there has been and still is much controversy. I do not propose to enter into this controversy; but I may perhaps take it as generally admitted that these Books—while certainly designed to impart pure Aristotelian doctrine—are inferior in philosophic grasp and penetration to the rest of the *Nicomachean Ethics*.

as well as positive action;—the not doing what we judge that we ought to do, no less than the doing what we judge that we ought not to do. Secondly, I mean action not *objectively* but *subjectively* unreasonable; *i.e.*, not action which is contrary to *sound* judgment, but action which is consciously contrary to the practical judgment of the agent. Such practical judgment will in many cases be the result of a process of reasoning of some kind, either performed immediately before the act is done or at some previous time; in these cases the term 'unreasonable' seems obviously appropriate. I shall, however, extend the term to cases in which the judgment opposed to the act is apparently intuitive, and not inferential. The propriety of this extension might, I admit, be questioned: but I want a term to cover both the cases above distinguished, and I can find no other familiar term so convenient. I wish then to examine consciously unreasonable action, in this sense, from a psychological point of view, as a fact of experience capable of being observed and analysed, without reference to the validity of the judgment involved in it, or of the process (if any) of reasoning by which it has been reached; simply with the view of finding out, by reflective observation, exactly what it is that happens when one knowingly acts against one's "better judgment".

Again, by "practical judgment" I do not necessarily mean what is ordinarily called "moral judgment" or "dictate of conscience" or of the "moral faculty". I mean, of course, to include this as one species of the phenomenon to be discussed; but in my view, and, I think, in the view of Common-Sense, there are many cases of consciously unreasonable action where morality in the ordinary sense does not supply the judgment to which the act is opposed. Let us suppose that a man regards ordinary social morality as a mere external code sanctioned by public opinion, which the adequately instructed and emancipated individual only obeys so far as he conceives it to be on the whole his interest to do so: still, as Butler pointed out, the conflict between Reason and Unreason remains in the experience of such a man in the form of a conflict of passion and appetite with what he judges from time to time to be conducive to his interest on the whole.

But if the notion of subjectively unreasonable action is thus, from one point of view, wider than that of subjectively wrong action, it would seem to be from another point of view narrower. For action subjectively wrong would be widely held to include action which conflicts with the agent's

moral *sentiment*, no less than action which is contrary to his practical *judgment*;—moral sentiment being conceived as a species of emotion not necessarily connected with a judgment as to what "ought to be done" by the agent or what is "good" for him. Indeed, in the account of the moral consciousness that some writers of repute give, the emotional element is alone explicitly recognised: the moral consciousness appears to be conceived merely as a species of complex emotion mixed of baser and nobler elements—the baser element being the vague associations of pain with wrong acts, due to experiences of the disagreeable effects of retaliation, punishment, and loss of social reputation, and of pleasure with acts that win praise, good-will and reciprocal services from other men; the nobler being sympathy with the painful consequences to others of bad acts, and the pleasurable consequences of good acts.

This is not my view: I regard it as an essential characteristic of moral sentiment that it involves a judgment, either explicit or implicit, that the act to which the sentiment is directed "ought" or "ought" not to be done. But I do not now wish to enter into any controversy on this point: I merely refer to it now to point out that conduct may be opposed to moral sentiment, according to the view of moral sentiment above given, without having the characteristic of subjective unreasonableness; and, again, this characteristic may belong to conduct in harmony with what would be widely regarded as moral sentiment. Suppose (*e.g.*) a religious persecutor yielding to a humane sentiment and remitting torture from a weak impulse of sympathy with a heretic, contrary to his conviction as to his religious duty; or suppose Macchiavelli's prince yielding to a social impulse and impairing his hold on power from a weak reluctance to kill an innocent person, contrary to his conviction as to what is conducive to his interest on the whole. In either case the persecutor or the tyrant would act contrary to his deliberate judgment as to what it would be best for him to do, and therefore with 'subjective unreasonableness'; but in both cases the sentiment that prompted his action would seem to be properly classed as a moral sentiment, according to the view above described. And in the latter case he certainly would not be commonly judged to act wrongly,—even according to a subjective standard of wrongness;—while in the former case it is at least doubtful whether he would be so judged.

By "unreasonable action," then, I mean voluntary action contrary to a man's deliberate judgment as to what is right

or best for him to do: such judgment being at least implicitly present when the action is willed. I therefore exclude what may be called "purely impulsive" acts: *i.e.*, acts which so rapidly and immediately follow some powerful impulse of desire, anger, or fear, that there is no room for any judgment at all as to their rightness or wrongness: not only is there no clear and explicit judgment with which the will conflicts, but not even a symbol or suggestion of such a judgment. But often when there is no explicit judgment there is an uneasy feeling which a pause for reflexion might develop into a judgment: and sometimes when we recall such states of mind there is a difficulty in saying whether this uneasy feeling did or did not contain an implicit judgment that the act was wrong. For it often happens that uneasy feelings similar to ordinary moral sentiments—I have elsewhere called them "*quasi*-moral"—accompany voluntary acts done strictly in accordance with the agent's practical judgment: *i.e.*, when such acts are opposed to widely accepted rules of conduct, or include among their foreseen consequences annoyance to other human beings. Hence in trying to observe and analyse my own experiences of unreasonable action I have found a difficulty in dealing with cases in which a moral (or prudential) judgment, if present at all, was only implicitly present: since when subsequent reflexion shows a past deed to have been clearly contrary to one's normal judgment as to what is right or best, this subsequent conviction is apt to mix itself with one's memory of the particular state of mind in which the deed was actually done. In this way what was really a quite vague feeling of uneasiness may be converted in memory into a more definite judgment opposed to the volition that actually took place. I have tried, however, to be on my guard against this source of error in my own observations; and it seems possible to guard against it by temporarily suppressing, for the purpose of the present inquiry, the disposition to self-censure—which for practical purposes it is commonly desirable to encourage, in spite of the misdirection to which it is liable; and keeping one's mind as far as possible in the attitude of impartial self-observation.

Finally, I must define somewhat further the limitation of my subject to the experience of persons apparently sane, and in an apparently normal condition. I mean by this to exclude from discussion all cases of discord between voluntary act and rational judgment, when the agent's will is manifestly in an abnormal condition,—either from some distinct cerebral disease, or from some transient disturbance of his

normal mental condition due to drugs, extreme heat, sudden calamity, or any other physical or psychical cause. Cases of this kind—in which there appears to be no loss of sanity, in the ordinary sense, the mental disturbance affecting the will and not the reason—are highly interesting from a psychological point of view, as well as from that of medicine or jurisprudence; whether they are cases of "aboulia" or impotence of will, when in spite of perfect clearness in a man's practical judgment he feels it simply impossible to form an effective volition in accordance with his judgment; or whether, to use M. Ribot's[1] terms, he suffers from "excess" and not "defect" of "impulsion," and appears to himself compelled to commit some atrocious crime or grotesque folly, or otherwise to act in a manner contrary to his practical judgment, under the constraint of an impulse which he feels to be irresistible. But the very characteristics that give these phenomena their striking interest render it desirable to reserve them for separate discussion. I admit that the line between "normality" and "abnormality" cannot be precisely drawn, and that certain phenomena, similar in kind to those just mentioned though much slighter in degree, fall within the experience of ordinarily sane persons free from any perceptible organic disorder or disturbance. I can myself recall momentary impressions of something like "aboulia": *i.e.*, moments in which I was transiently conscious of an apparent impossibility of willing to do what I judged it right to do. And though I have not myself had any similar experience of irresistible "excess of impulsion," I see no reason to doubt that others have had such experiences, apart from any recognisable cerebral disorder; it would seem that hunger and thirst, aversion to death or to extreme pain, the longing for alcohol, opium, &c., occasionally reach a point of intensity at which they are felt as irresistibly overpowering rational choice. But cases of either kind are at any rate very exceptional in the experience of ordinary men; and I propose to exclude them from consideration at present, no less than the more distinct "maladies de la volonté" before mentioned. I wish to concentrate attention on the ordinary experiences of "yielding to temptation," where this consciousness of the impossibility of resistance does not enter in; where, however strong may be the rush of anger or appetite that comes over a man, it certainly does not present itself as invincible. This purely subjective distinction seems to afford a boundary line *within*

[1] See *Les Maladies de la Volonté*, par Th. Ribot.

which it is not difficult to keep, though it would doubtless be difficult or impossible to draw it exactly.

To put it otherwise—though I do not at all wish to mix up the present discussion with a discussion on Free Will—it may tend to clearness to define the experiences that I wish to examine as those in which there is an *appearance* of free choice of the unreasonable act by the agent—however this appearance may be explained away or shown to be an illusion.

The connexion of 'subjective irrationality'—or at least 'subjective wrongness'—and 'freedom' is indeed obvious and natural from a jural point of view, so far as the jurist retains the popular view of punishment as retributive and the popular conceptions of Desert and Imputation: since in this view it would seem that 'subjective wrongness' must go along with 'freedom' in order to constitute an act fully deserving of punishment. For the jurist's maxim "Ignorantia juris non excusat" is not satisfactory to the plain man's sense of equity: to punish any one for doing what he at the time did not know to be wrong appears to the plain man at best a regrettable exercise of Society's right of self-preservation, and not a realisation of ideal justice. But from a psychological point of view there is no ground whatever for mixing up the question whether acts are metaphysically speaking "free" with the question whether they are accompanied with a consciousness of their irrationality. No Libertarian, so far as I know, has ventured on the paradox of asserting it to be essential to the conception of a rational agent that it should be possible for him to act irrationally; and no Determinist need find any difficulty in admitting that a man may be determined by a predominant appetite or passion to act in a manner opposed to what he, at the same time, still recognises as his true interest.

Nevertheless, my present wish to call attention to the characteristics and varieties of unreasonable action is largely due to the fact that its very existence appears to be not sufficiently recognised by influential writers of the most opposite schools of philosophy.

I find that such writers are apt to give an account of voluntary action which—without expressly denying the existence of what I call subjective irrationality—appears to leave no room for it. They admit, of course, that there are abundant instances of acts condemned, as contrary to sound practical principles, not only by the judgment of other men but by the subsequent judgment of

the agent: but in the analysis which they give of the state of mind in which such actions are willed, they appear to place the source of error in the intellect alone and not in the relation of the will to the intellect. For instance, Bentham affirms that "on the occasion of every act he exercises, every human being is led to pursue that line of conduct which, according to his view of the case, taken by him at the moment, will be in the highest degree contributory to his own greatest happiness":[1] and as Bentham also holds that the "constantly proper end of action on the part of every individual at the moment of action is his real greatest happiness from that moment to the end of his life,"[2] there would seem to be no room for what I call "subjective unreasonableness". If Bentham's doctrine is valid, the defect of a volition which actually results in a diminution of the agent's happiness must always lie in the man's "view of the case taken at the moment": the evils which reflexion would show to be overwhelmingly probable consequences of his act, manifestly outweighing any probable good to result from it, are not present to his mind in the moment of willing; or if they are in some degree present, they are at any rate not correctly represented in imagination or thought. The only way therefore of improving his outward conduct must be to correct his tendencies to err by defect or excess in the intellectual representation of future consequences: as he always acts in accordance with his judgment as to what is most likely to conduce to his greatest happiness, if only all errors of judgment were corrected, he would always act for his real greatest happiness. (I may add that so acting, in Bentham's view, he would also always act in the way most conducively to general happiness: but with the question of the harmony of interests in human society we are not now concerned.)

I do not think that Bentham's doctrine on this point was accepted in its full breadth by his more influential disciples. Certainly J. S. Mill appears to admit important exceptions to it, both in the direction of self-sacrifice and in the direction of self-indulgence. He admits, on the one hand, that the "hero or the martyr" often has "voluntarily" to "do without happiness" for the sake of "something which he prizes more than his own individual happiness"; and he admits, on the other hand, that "men often, from infirmity of

[1] Bentham, *Constitutional Code*, Introduction, p. 2 (vol. ix. of Bowning's edition).

[2] Bentham, *Memoirs*, p. 560 (vol. x. of Bowning's edition).

character, make their election for the nearer good, though they know it to be the less valuable; and this no less when the choice is between two bodily pleasures, than when it is between bodily and mental. They pursue sensual indulgence to the injury of health, though perfectly aware that health is the greater good".[1] But though Mill gives a careful psychological analysis[2] of the former deviation from the pursuit of apparent self-interest, he does not pay the same attention to the latter; and yet it is at least as difficult to reconcile the conscious self-sacrifice—if I may be allowed the term—of the voluptuary as the conscious self-sacrifice of the moral hero with Mill's general view that "to desire anything, except in proportion as the idea of it is pleasant, is a physical impossibility". For in a hedonistic comparison of "sensual indulgences" and "injury to health" the distinctions of quality, by which Mill's Hedonism is complicated, hardly come in: the prudential estimate, in which the pleasure of champagne at dinner is seen to be outweighed by the headache next morning, is surely quantitative rather than qualitative: hence when the voluptuary chooses a "pleasure known to be the less valuable" it would seem that he must choose something of which—in a certain sense—the "idea" is less "pleasant" than the idea of the consequences that he rejects. In short, Mill's general statement as to the relation of Desire to Pleasure and the Pleasant seems clearly to need some qualification; and if we attempt to give this qualification, we have to examine more closely the nature of the mental phenomenon in which what he calls "infirmity of character" is manifested.

But before I proceed to this examination, I wish to point out that the tendency either to exclude the notion of 'wilful unreasonableness,' or to neglect to examine the fact which it represents, is not found only in psychologists of Bentham's school; who regard pleasure and the avoidance of pain as the sole normal motives of human action, and the attainment of the greatest balance of pleasure over pain—to self or to other sentient beings—as the only "right and proper" ends of such action. We find this tendency also in writers who sweepingly reject and controvert the Hedonism of Bentham and Mill. For example, in Green's *Prolegomena to Ethics*, both the psychological doctrine that pleasure is the normal motive of human action, and the ethical doctrine that it is the proper motive, are controverted with almost tedious emphasis and iteration. But

[1] *Utilitarianism*, chap. ii. [2] *Ibid.*, chap. iv.

Green still lays down as broadly as Bentham that every person in every moral action, virtuous or vicious, presents to himself some possible state or achievement of his own as for the time his greatest good, and acts for the sake of that good; at the same time explaining that the kind of good which a person at any point of his life "presents to himself as greatest depends on his past experience".[1] From these and other passages we should certainly infer that, in Green's view, vicious choice is always made in the illusory belief that the act chosen is conducive to the agent's greatest good: although Green is on this point less clearly consistent than Bentham, since he also says that "the objects where good is actually sought are often not those where reason, even as in the person seeking them, pronounces that it is to be found".[2] But passages in the former sense are more common in his book: and he seems to make no attempt to bring them into harmony with that last quoted.

I cannot accept the proposition 'that every man always acts for the sake of what he presents to himself as his own greatest good,' whether it is offered in a hedonistic or in a non-hedonistic form. At the same time, I think that the statements which I have quoted from Bentham and Green are by no means to be treated as isolated paradoxes of individual thinkers: I think they point to a difficulty widely felt by educated persons, in accepting and applying the notion of "wilful wrongdoing," *i.e.*, conscious choice of alternatives of action known to be in conflict with principles still consciously accepted by the agent. On the other hand, this notion of wilful wrongdoing is so clearly a part of the common moral experience of mankind that it seems very paradoxical to reject it, or explain it away.

Under these circumstances it seemed to me worth while to make a systematic attempt to observe with as much care as possible—and as soon as possible after the phenomenon had occurred—the mental process that actually takes place in the case of unreasonable action. I have found some difficulty in making the observations: because action consciously unreasonable belongs to the class of phenomena which tend to be prevented by attempts to direct attention to them. This result is not, indeed, to be deprecated from a practical point of view: indeed, it might, I think, be fairly urged as a practical argument for the study of psychology, that the habitual direction which it gives to attention tends to

[1] Green, *Prolegomena to Ethics*, book ii. chap. i. f. 99.
[2] *L.c.*, book iii. chap. i. f. 177.

diminish the tendency to consciously unreasonable conduct. But though perhaps practically advantageous, the result is from a scientific point of view inconvenient. This direction of attention, however, cannot be long maintained; and in the intervals in which it is otherwise directed the psychological observer is probably as liable to act unreasonably as any one else; though probably the phenomenon does not last quite as long in the case of the psychologist, since as soon as he is clearly conscious of so acting, the desire to observe the process is likely to be developed and to interfere with the desire which is stimulating the unreasonable volition.

I also recognise that I ought not to put forward the results that follow as typical and fairly representative of the experiences of men in general. It is a generally recognised obstacle in the way of psychological study, especially in the region of the intellect and the emotions, that the attitude of introspective observation must be supposed to modify to some extent the phenomena observed; while at the same time it is difficult to ascertain and allow for the amount of effect thus produced. Now in relation to the experiences with which I am here concerned, the attitude of disengaged observant attention is peculiarly novel and unfamiliar, and therefore its disturbing effect may reasonably be supposed to be peculiarly great. I have, accordingly, endeavoured to check the conclusions that I should draw from my own experience by observation and interpretation of the words and conduct of others. My conclusion on the whole would be that—in the case of reflective persons—a *clear* consciousness that an act is what ought not to be done, accompanying a voluntary determination to do it, is a comparatively rare phenomenon. It is, indeed, a phenomenon that does occur, and I will presently examine it more closely: but first it will be convenient to distinguish from it several other states of mind in which acts contrary to general resolutions deliberately adopted by the agent may be done; as most of these are, in my experience, decidedly more common than unreasonable action with a clear consciousness of its unreasonableness. These other states of mind fall under two heads: (1) cases in which there is at the time no consciousness at all of a conflict between volition and practical judgment; and (2) cases in which such consciousness is present but only obscurely present.

Under the former head we may distinguish first the case of what are commonly called thoughtless or impulsive acts.

I do not now mean the sudden "purely impulsive" acts of which I spoke before: but acts violating an accepted general rule, which, though they have been preceded by a certain amount of consideration and comparison, have been willed in a state of mind entirely devoid of any application of the general rule infringed to the particular case. Suppose, for instance, that a man has received a provocative letter in relation to some important business in which he is engaged: he will sometimes answer it in angry haste, although he has been previously led by painful experience to adopt a general resolution to exclude the influence of angry feeling in a correspondence of this kind, by interposing an interval of time sufficient ordinarily to allow his heated emotion to subside. I conceive that often, at least, in such cases the rule is simply forgotten for a time, just as a matter of fact might be: the effect of emotion is simply to exclude it temporarily from the man's memory.

The writer of the Aristotelian treatise before mentioned suggests, however, an alternative possibility, which may sometimes be realised in the case of impulsive acts. He suggests that the general rule—say 'that letters should not be written in anger'—may be still present to the mind; though the particular judgment, 'My present state of mind is a state of anger'—required as a minor premiss for a practical syllogism leading to the right conclusion—is not made. And no doubt it may happen that an angry man is quite unaware that he is angry; in which case this minor premiss may be at the time absent through pure ignorance. But more often he is at least obscurely conscious of his anger; and if he is conscious of it at all, and has the general rule in his mind, it seems to me hardly possible that he should not be at least obscurely aware that the particular case comes under the rule.

More commonly, I think, when a general resolution is remembered, while yet the particular conclusion which ought to be drawn is not drawn, the cause of the phenomenon is a temporary perversion of judgment by some seductive feeling;—such as anger, appetite, vanity, laziness. In such cases a man may either consciously suspend his general rule, from a temporary conviction, caused by the seductive feeling, that he has adopted it without sufficient reason: or he may erroneously but sincerely persuade himself that it is not applicable to the case before him. Suppose he is at dinner and the champagne comes round: he is a patient of Sir Andrew Clark and has already drunk the limited amount allowed by that rigid adviser: but rapidly the

arguments of Dr. Mortimer Granville occur to his mind, and he momentarily but sincerely becomes persuaded that though an extra glass may cause him a little temporary inconvenience, it will in the long run conduce to the maintenance of his physical tone. Or, as before, he has received a letter that rouses his indignation: he remembers his rule against allowing temper to influence his answer; but momentarily—under the influence of heated feeling—arrives at a sincere conviction that this rule of prudence ought to give way to his duty to society, which clearly requires him not to let so outrageous a breach of propriety go unreproved. Or having sat down to a hard and distasteful task which he regards it as his duty to do—but which can be postponed without any immediate disagreeable consequences to himself—he finds a difficulty in getting under way; and then rapidly but sincerely persuades himself that in the present state of his brain some lighter work is just at present more suited to his powers—such as the study, through the medium of the daily papers, of current political events, of which no citizen ought to allow himself to be ignorant.

I have taken trivial illustrations because, being not complicated by ethical doubts and disagreements, they exemplify the phenomenon in question most clearly and simply. But I think that in graver cases a man is sometimes sincerely though very temporarily convinced by the same kind of fallacious reasoning—under the influence of some seductive feeling—that a general resolution previously made *either* ought to be abrogated or suspended *or* is inapplicable to the present case. Such a man afterwards will see the fallacy of the reasoning: but he may not have been even obscurely conscious at the time that it was fallacious.

But, again, these examples will also serve as illustrations of a different and, I think, still more common class of cases which fall under my second head; in which the man who yields to the fallacious process of reasoning is dimly aware that it is fallacious. That is, shortly, the man sophisticates himself, being obscurely conscious of the sophistry.

Moralists have often called attention to sophistry of this kind, but I think they have not fully recognised how common it is, or done justice to its persistent, varied, and versatile ingenuity.

If the judgment which Desire finds in its way is opposed to the common-sense of mankind, as manifested in their common practice, the deliberating mind will impress on itself the presumption of differing from a majority so large: if, on the other hand, the restraining dictate of reason is one

generally accepted, the fallibility of common-sense, and the importance of the individual's independence, will be presented in a strong light. If a novel indulgence is desired, the value of personal experience before finally deciding against it will be persuasively shown; if the longing is for an old familiar gratification, experience will seem to have shown that it may be enjoyed with comparative impunity. If the deliberating mind is instructed in ethical controversy, the various sceptical topics that may be culled from the mutual criticisms of moralists will offer almost inexhaustible resources of self-sophistication;—such as the illusoriness of intuition, if the judgment is intuitive; if it is a reasoned conclusion, the fact that so many thoughtful persons reject the assumptions on which the reasoning is based. The Determinist will eagerly recognise the futility of now resisting the formed tendencies of his nature; the Libertarian will contemplate his indefeasible power of resisting them next time. The fallacies vary indefinitely; if plausible arguments are not available, absurd ones will often suffice: by hook or by crook, a *quasi*-rational conclusion on the side of desire will be attained.

Often, however, the seductive influence of feeling is of a more subtle kind than in the instances above given, and operates not by producing positively fallacious reasoning, but by directing attention *to* certain aspects of the subject, and *from* certain others. This (*e.g.*) is, I think, not uncommonly the case when an ordinarily well-bred and well-meaning man acts unreasonably from egotism or vanity: he has an obscure well-founded consciousness that he might come to a different view of his position if he resolutely faced certain aspects of it tending to lower his opinion of himself: but he consciously refrains from directing attention to them. So again, in cases where prompt action is necessary, passion may cause a man to acquiesce in acting on a one-sided view, while yet obscurely aware that the need is not so urgent as really to allow no time for adequate consideration.

In both the classes of cases last mentioned we may say that the wrongdoing is really wilful though not clearly so: the man is obscurely conscious either that the intellectual process leading him to a conclusion opposed to a previous resolution is unsound, *or* that he *might* take into account considerations which he *does* not distinctly contemplate and that he ought to take them into account. But though he is obscurely conscious of this, the sophistical or one-sided reasoning which leads him to the desired practical conclusion is more clearly present.

Finally, there remains pure undisguised wilfulness—where

a man with his eyes open simply refuses to act in accordance with his practical judgment, although the latter is clearly present in his consciousness, and his attention is fully directed towards it. I think it undeniable that this phenomenon occurs: but my experience would lead me to conclude that it more often takes place in the case of negative action—non-performance of known duty: in the case of positive wrong action some process by which the opposing judgment is somehow thrust into the background of consciousness seems to me normally necessary. In other words, I should say that it was far easier for a desire clearly recognised as conflicting with reason to inhibit action than to cause it.

Even in the exceptional case of a man openly avowing that he is acting contrary to what he knows to be both his interest and his duty, it cannot be assumed that a clear conviction of the truth of what he is saying is necessarily present to his consciousness. For a man's words in such a case may express not a present conviction but the mere memory of a past conviction; moreover, one of the forms in which the ingenuity of self-sophistication is shown is the process of persuading oneself that a brave and manly self-identification with a vicious desire is better than a weak self-deceptive submission to it—or even than a feeble fluctuation between virtue and vice. Thus, even a man who said "Evil be thou my good" and acted accordingly might have only an obscured consciousness of the awful irrationality of his action:—obscured by a fallacious imagination that his only chance of being in any way admirable, at the point which he has now reached in his downward course, must lie in candid and consistent wickedness.

IV.—THE EPISTEMOLOGY OF ED. V. HARTMANN.

By W. Caldwell.

In a former paper[1] I sought to study the consequences of Schopenhauer's Criticism of Kant's Epistemology. The most important of them, I think, are: the rejection of the doctrine of Subjective Idealism both as regards the form and the matter of knowledge, and the rejection of the thing-in-itself as anything save a conception of the mind. This paper will seek to clear the ground a little further in the same direction by considering the Epistemological problem as seen under the forms of the hypotheses of Realism and Idealism. In particular, I shall seek to consider the statement Hartmann gives of the problem of Epistemology and his treatment of the various solutions which he holds can be given of it. His theory is at once a criticism of some recent chapters in the history of Kantism and itself a chapter in that history.

Curious though it may seem to us in England who have had Berkeley 'always with' us, Hartmann, like Schopenhauer begins from Subjective Idealism as the outcome of Kant, or, more strictly, he finds the problem of Epistemology in the Subjective Idealism which is to be traced through various exponents of Kantism like Schopenhauer, Lange, Vaihinger, and even Helmholtz, to the Critique of Pure Reason, the '*fons et origo*' of all Nineteenth Century Philosophy. To calling Kant a Subjective Idealist, Hartmann would hardly commit himself; he seems to have on the whole an eminently sound reluctance to label Kant's Philosophy at all, and thinks of Kant as in the main a transition between the common-sense view of the world and the completely metaphysical—the founder, we might say, of a sort of Transfigured Realism, a realism into which metaphysical as well as physical entities enter as constants. Kant, Hartmann says, is after all more concerned with Epistemology than with Metaphysic—an opinion which explains the putting aside, as Hartmann does, of the metaphysical systems of Fichte, Schelling, Hegel, and Schopenhauer in a purely Epistemological investigation (his metaphysical indebtedness to the three latter in particular Hartmann estimates elsewhere); and indeed the stupendous speculative edifices which were reared on the principle of Kant withdrew, by

[1] *Cf.* Mind, O.S., vol. xvi. p. 355.

their very proportions, attention from the merely Epistemological work of Kant in which of late years an interest has been taken in its connexion with Physical Science. Though concerned in the main with Hartmann's Epistemology, I shall not scruple to lay my pen on the loophole through which he runs his Metaphysic into his Epistemology.

Hartmann's two principal Epistemological writings are the *Kritische Grundlegung des Transcendentalen Realismus* and the *Grundproblem der Erkenntisstheorie*. The *Grundlegung*, after a careful introduction in which the object of the writer and his terminology are set forth with admirable exactness, starts from what Hartmann regards to be the cardinal question of Epistemology and then considers critically in order the answers given by forms of Idealism and Realism to it. The *Grundproblem* is more didactic than investigative; it is a supplement to the *Grundlegung*, being what Hartmann in Hegelian phraseology calls a phenomenological presentation of the problem of Epistemology under the light of different theories. The result of both writings is to show that neither 'Naive Realism' nor any form of Idealism but only 'Transcendental Realism' is adequate to the complete explanation of knowledge. In them both Hartmann writes an eminently clear and measured style, and by appropriate outlines and *résumés* greatly facilitates the reader's apprehension. The vigorous and careful reasoning of the *Grundlegung* it is a pleasure to follow.

I have said that Hartmann starts from the difficulty raised by the Idealist about the nature of knowledge. The *Grundlegung* starts from the alleged fact that we really only know what is immanent in our consciousness; in fact, Hartmann says that he only writes for those who have learned this first lesson in philosophy, and requests those who have not learned it to turn their attention at once to the study of Berkeley and of modern Psycho-Physics. The confirmation of Idealism that Schopenhauer found in Kant, Hartmann does not find; he censures Schopenhauer for thinking that Kant's proofs of the subjectivity of Space and Time were adequate, and gives elsewhere himself a refutation of these proofs. It becomes of course part of his own theory to vindicate the objectivity of the categories, and indeed the fact that we do apply the categories to reality constitutes a permanent reason for trying to get out of the subjectivity of knowledge. I mention this here at the outset, for if we want to follow Hartmann's reasoning at all, we must not pull him up at the inconsistency which any one who accepts the Idealistic account of consciousness is guilty of in letting slip

even one hint or one word about objects ' outside ' consciousness. Transcendental Realism is the theory of knowledge which, while recognising the fact that all conscious knowledge is immanent and subjective, yet provides us with a knowledge of things-in-themselves, and this in face of the logical difficulties which seem to render it impossible to do so. It is called ' Transcendental ' in opposition to ' Naive ' Realism, because it teaches us that the things that are real are not the objects of our consciousness (these being only subjective) but certain transcendent objects or objects outside consciousness, and because we may therefore regard the perceptions we find existing in our consciousness to have in Kantian language ' transcendental ' significance, *i.e.*, a reference to really existing things over and above consciousness. It is called Transcendental ' Realism ' in opposition to Transcendental ' Idealism,' which in view of the fact that all knowledge is immanent and subjective despairs of all knowledge of things-in-themselves. Lastly, ' Transcendental ' Realism differs from ' Naive ' Realism in holding that our knowledge of things-in-themselves is not direct but indirect.

I. If we ask Hartmann for his proofs that our only immediate knowledge is our consciousness-content, the changes in our psychical states, we find that he appeals at once for one thing to the facts of Science. He cannot, like Berkeley or Hume, 'send a man to his senses,' to learn the truth about knowledge, for the appeal to consciousness is in his eyes the basis of " Naive Realism," which is altogether a false theory of the matter. The hypothesis of Naive Realism Hartmann summarises [1] in the following five positions: (1) What is perceived is the things themselves, not for example only their effect, and still less mere representations of imagination; (2) What is perceived in things is really so in the things as it is perceived, which does not prevent much being in things which is not perceived; (3) What work on each other are the things themselves, and this Causality of things is itself Object of Perception; (4) Things are as they are perceived, even when they are not perceived, it being perhaps possible that in the meantime a change takes place in them through sufficient cause; Perception accordingly shows us things as they are in themselves, apart from all Perception, *i.e.*, the perceived things are things-in-themselves; (5) While things-in-themselves are perceived by all percipients, the objects of Perception are for all percipients one and the same; this one single world of things-in-themselves con-

[1] *Grundprob. der Erkctissntheorie*, s. 14.

stitutes as common object of Perception the means of connexion, the causal link, and the means of communication between the thoughts and strivings of the different subjects of consciousness. Hartmann thus finds his cardinal fact of Epistemology to be in contradiction with the immediate testimony of consciousness, and does not hesitate to proclaim the Common-sense view of the relation of knowledge and reality to be untenable and contradictory on the strength of the scientific refutation of Naive Realism. It has always been a small thing to metaphysicians that common-sense should seem full of contradictions, their assumption being that correct theory is one thing and practice quite another, and that in fact Common-sense can and does get on without theory or, in the case in point, with a wrong theory. Now the difficulty of interpreting common-sense beliefs is notorious, and indeed one is led to think that it would be impossible to formulate these beliefs if we had not an objective measure of them in actions. Psychologically in the Perception of reality belief and action are two sides of the one act of the organic self; we may therefore measure the beliefs of common-sense as to reality in the actions of common-sense, if one may so speak. Mr. Spencer somewhere practically says that philosophers have never really doubted the reality of knowledge or perception, but have only often thought that they do so for certain reasons. It is even so; only one must remember that to philosophers the reasons in question were not merely reasons but facts—facts prior to the generally received facts of perception. But surely the best way of studying the facts of perception is to study them in their entirety, *i.e.*, as aspects of an organic function of percipient beings. Hartmann, for example, recognises the fact that the knowledge of the senses is evidently not an end in itself, but is rather a means to the maintenance and furtherance of life functions.

By giving up the particular isolated sensation as not a datum, an original datum of experience in the sense it was too long thought to have been, we have come to regard perceptions as the more or less complex functional apprehension on the part of an organic being of that sphere of reality into immediate relation with which it is thrown by appropriate physical or natural process. It is wrong to think of perception as purely a *quasi*-psychical movement (if such may well exist); without the organic reaction or adjustment to stimulus there is no Perception, as, *e.g.*, in the strained ear or bent head or contraction of the pupil incident to the falling of light on the eye. It is thus not only warrantable but

necessary to seek for the beliefs of common-sense as to the perception of reality in the actions which are not only called forth by perception, but which help to constitute it. We shall in the end, I think, see that instead of asking for a justification of the objectivity of perception from the point of view of what is immanent to consciousness, it would be more natural and more correct to ask for the justification of the introspective standpoint which philosophers have adopted in regard to perception. The real matter to be explained in Perception is not David Hume's sturdy doubts about his actions in crossing a thronged thoroughfare but these actions themselves. Our beliefs about reality are the ideas that regulate the movements of our bodies, and there is thus indeed a presumption against the existence of contradictory beliefs in common-sense in the fact that such beliefs would in general (as they do in the case of illusions in particular) nullify or defeat action. That our perceptual experiences are consistent with each other is sufficient ground for holding that the perceptual world is at least a reality: our perceptions at least accomplish the definite end of regulating action. Science accepts the perceptual world as a fact demanding explanation along with the belief of common-sense in that world—that there is a world of things in space and time acting and reacting on each other. But, says Hartmann, our spatial-temporal perceptions of position and movement are the only ones that are in things the same as they are in the mind; that is, our perceptions of position and movement are like real positions and real movements, while our specialised perceptions are not like anything in things not the same—colour, *e.g.*, is only in the mind, and so on. But what can be meant by this? Science does not deny that there exists, on the testimony of the great majority of people, a colour world and a heet world, and so on. Is Common-sense really committed to any more than this about its specialised perceptions or its perceptions in general?

Let us seek to discover—quite generally—the broadest and simplest fact about Perception as above set forth. Hartmann says he objects to the recourse for the explanation of psychological facts to consciousness of which he himself has no experience, that of lower animals, say. It is, however, impossible to restrict either Psychology or Epistemology to the use of the Subjective method only. To use an illustration of Hartmann's own, the ordinary man thinks he has as immediate a hold upon reality as the polyp has in closing round its booty. Is this not true? The part that Association or Suggestion plays in Perception is of course too well

recognised to be lost sight of; but is not Perception immediate as well as mediate? and immediate indeed in some regards at the very moment it is mediate in others? Every perceiving being is a natural mechanism, a part of nature, and has the immediate sense of the reality of the medium in which it dwells, whatever that may be. Perception in short cannot be said to be only perception of what is immanent in consciousness, for perception is always the sense of existence in a world, in a whole world, in which self and not-self—whether the distinction be implicit or explicit—are correlated parts. *In* Perception spatial distinctions exist; it cannot itself therefore be a *mere* 'within'. A medusa which is a mere swimming bell can have no doubt of the reality of the watery world in which it lives and moves, for the movements of contraction and diffusion which are its perceptions make it feel itself a part of an unlimited world in which also movement takes place. In a word, if Perception imply movement, as it seems always to do—apprehensive or reactionary movement—the percipient has in movement an actual living relation to the large whole of which its body forms a part. I grant the psychological position that reality in the end means relation to my movements and impulses, but the converse is surely also true that felt movements and impulses in me mean the immediate sense of a world present to me which conditions and limits my movements. Movement is not a merely spiritual phenomenon; indeed it can hardly be called such at all, being physically or materially conditioned. In its movements in response to physical stimuli, each percipient has the immediate sense of a real world which affects it *thus or thus*—for that is perhaps all sense-perception says. In this diffuse organic sense of reality there is no inference whatever, for there is no break in the development of the life of the organism itself; a cell too is itself a differentiation of physical reality, and thus we can never think of reality as something outside it.

The organic or imperfectly localised sense of reality is the type of perception; it alone in strictness ought to be called Naive Realism, because the world of which it is the sense hardly contains any definite qualities except perhaps that of *change* or transition (so-called *Common-sense* is hardly naive, for it implies a use of the understanding). Strictly speaking, Perception or Immediate Knowledge only informs us of a *that* and hardly of a *what:* the simplest perceptions are nothing but the reflex sense of a *quasi*-reality. Unconsciously an organism constructs by its earliest perceptual reactions a medium or background on which to project its subsequent

perceptual data. The whole significance of perception consists in the relation of the different perceptual data or qualia or continua—for these are the elemental facts of Perception —to each other, as Berkeley brought out. Naive Realism does not need to be able to figure to itself where its perceptions are, whether they are in the mind or in the object, and does not stand or fall by the decision of any such question. A being with only one eye might be so absorbed in the perception of a colour that the colour would seem to be spread over its whole knowable sphere and to be thus, in fact, its sole world for the time. The significance of the specialised perceptions lies wholly, not in being in a certain place or out of it, but in being significant of the primary fields of experience.

II. The five propositions in which Hartmann states[1] the scientific refutation of Naive Realism are intended to be antithetical to the five positions in which that theory was summarised. (1) What we perceive is not things-in-themselves, but only their effect on our senses; things-in-themselves are from their very nature incapable of being perceived. The whole strength of this sentence rests on the supposition of the existence of the isolated sensation as a primary datum of consciousness: in that sense, however, the isolated sensation is a fiction. There is a fact corresponding to the isolated sensation in Perception, but it is only one of a whole circle of facts: Science is bound to consider the localised perception in reference to the development of the highly specialised sensibility which makes it possible, that is, as a modification of the immediate crude sense of reality which an organism that adapts itself to its environment has as an original and persistent perception. To say that a perception exists in the mind is to say that it has been put there in the course of a whole neural and psychical development; a localised perception cannot therefore be regarded as a first thing out of which or out of a number of things similar to it the world is constructed. The question, in fact, "Is or is not my perception (red colouring) *like* the things I believe I see with my eyes?" never arises to the merely percipient mind. It is not that the 'common man' is never occupied with such subtleties as the possible physical counterparts to his sensations, but that distinctions in the psychical content are never to be thought of except as the progressive and parallel accompaniments to other distinctions which are by a continual process drawn in the content of the physical world;

[1] *Grundprob. Erkennt.*, p. 23.

indeed the psychical distinctions are drawn later than distinctions in the physical world, which too at the outset we only know in the most general way possible; and, further, the distinction of our perceptions into specialised perceptions is never probably a *fait accompli* so much as an act of our total available consciousness, which too at the outside limits of its sphere—if we allow ourselves to think of the matter thus—shades into the mere confused bodily sense of reality to which I have referred above. With the rejection of 'things' as not entering as units into our simplest consciousness, follows the rejection of the still more complicated expression 'things-in-themselves'. (2) What is perceived can never be attributed to things-in-themselves just as it is perceived, with the exception of the special determinations of position and movement; in all other qualities things and perceptions are completely dissimilar. This too countenances the view that Perception is at some moment in time a definite reckoning up with reality when things get back from the mind with interest what they have poured previously in upon it, becoming credited with very much they did not give ('red' IN the orange and so on); so far it raises an imaginary difficulty. The significance of perception lies, it is true, in its suggestiveness, but that we are not forced to settle calculatively and deliberately; it is found in the movement of action and reaction which underlies and constitutes all perception in connecting it as an organic process with physical process in general; my body as a physical thing in perception adopts a certain relation to physical things which affect it. Common-sense is never able really to interpret its experiences on their theoretical as differing from their practical side; in seeking to do so it is liable both to fallacies of observation and interpretation. To Science the facts which common-sense attests are simply the conditions of problems. The fact of Perception is all that Common-sense is responsible for, *i.e.*, *that* a world of things exists, and not *what kind* of a world. Perceptual knowledge is true of reality, but how that reality is constituted is not matter of perceptual but of inferential knowledge. As a fact of experience, as a fact of nature, one perceptional continuum is as real as another: that colour exists is matter of fact just as much as that movement exists; and this is all that Perception teaches if we will persist in interpreting our perceptions theoretically and not practically—perception gives us, as we say, the *matter* of knowledge—that is all. It is often implied, for example, that the tangible perceptions of objects are more real than our other perceptions; they are

not; tangible perceptions have primarily a practical significance just like other perceptions; what I feel to be two may be really one, or what I feel to be one a thousand; what is felt smooth may be quite irregular in texture; movement supposed to be upwards may be movement downwards, &c., &c. All perceptions theoretically regarded state only problems. (3) It is the things-in-themselves which work upon each other, and not the perceptions; the causal action of things upon each other can only be perceived as it is limited to a causal working upon our senses. This means, I suppose, that we cannot know the real causal working of things because we only know the effects their workings produce upon our senses. But does this say any more than that we can only know of causality what we perceive? As I have given up the doctrine that Perception is subjective, it is no disproof of the reality of our causal perceptions to say that they remain only perceptions—of effects, of say *change*. The common-sense belief that things are centres of force which influences even our statement of dynamical laws is not so much utterly erroneous as imperfect knowledge. But Naive Realism does not stand or fall with the rightness or wrongness of any theory of causality it may have—I should prefer to say it had none. (4) Things-in-themselves are, apart from causally conditioned change, constant and their existence is continued, while perceptions on the other hand are 'intermittent' and their existence discontinuous. As to this, firstly, the only material things-in-themselves that are constant are the chemical substances of which the world is composed, whatever they may ultimately be shown to be, and I don't suppose Hartmann refers to these here. Ordinary things, it may be said, undergo just as many changes and modifications as do the psychical states of the percipient. As long as the percipient or his brain exists, his knowledge is true of the things that exist as long as he or it does; more than this need not here be said. (5) The world of things-in-themselves is for all subjects one and the same, but the perceptions out of which, and the operations of thought through which they are deduced, are in every subject of consciousness numerically different, even when they are similar as to content. This objection resolves itself into the last. We may, if we choose, think of a psychical energy which pervades all psychical subjects and remains a constant in the universe just as we think of a physical energy pervading all the 'things' in the physical world which are constituted out of large aggregates, persist for a time and then go to form other aggregates. I pass to a few words on the Physiological refutation of Naive Realism.

The physiological refutation of Naive Realism is intended to be corroborative of the above five positions of Physical Science. It says that what we perceive is only the world of our consciousness, that the world of things-in-themselves [1] cannot penetrate into consciousness because their effects on the mind undergo innumerable physiological transformations before they reach the brain, the organ of consciousness, and because when they do reach it, the complicated excessively rapid buzzing dance of brain molecules has no similarity with the restful, only gradually changing consciousness-content of the percipient, and that in short the world of consciousness and the world of being are two completely heterogeneous and different worlds. I cannot see that all this throws any further doubt on the reality of our knowledge of the real, although it may be said to introduce new terms into the problem. All that the facts of Science do is to place before us the assemblage of conditions which as matters of fact must be realised in order that the perception of reality which the percipient has may be possible; they do not for one moment render the affirmation of the percipient that he perceives, let us say—something, questionable. In strictness it is not the fact which is perceived that is in the percipient, but only his interpretation of it. That the frog through whose nerve or muscle I send an electric shock feels something I, the observer, know to be fact; what he does feel is probably a universe of tingling movement, and that universe, though only in him, is a real fact and a fact which I, who see more than he at the moment does, must explain. Common-sense, as Spinoza often reminds us, knows nothing of the infinitude of causes which determine its movements; but this does not destroy the fact that the perceived world whatever it may for the time be is a real world and a whole world containing more or less explicitly distinctions in itself (of course only *relatively* real and *relatively* whole, though not necessarily known as such). The objection that the diffuseness and intensity and quality make up my perception and that these are *de facto* only in me, is after a certain point only verbal; my perception means the world I am at the moment perceiving. When I am told then that colour is only in me, which in the absence of the refracting media of the eye would have no existence, I reply, firstly, that indeed the colour continuum (supposing it for the moment to be such) is not a reality which I find existing apart from other continua or realities and that therefore it is literally true that 'colour' is an

[1] *Grundprob. der Erkennt.*, p. 34.

abstraction and only "in my head"; but, secondly, that the colour world when I allow myself explicitly to think of it or perceive it (if possible) by itself is a world containing distinctions in itself, and that for my part I could conceive of the experiences of a seeing being as something perfectly definite and real; and that, thirdly, to suggest even the absence of the refracting media from colour is to suggest that a phenomenon could be possibly something after the half of it had been taken away. The world we know is a world in which psychic or nervous process is attendant on physical process and the perception of the one conditioned by the perception of the other: there is no real warrant for regarding either the psychical or the physical process as the sole reality: 'subjective' and 'objective' processes are related as the terms x and y in the equation $(f)\,x=(f)\,y$. The warrant I have for predicating my perceptual knowledge of reality is nothing less than the fact that my knowledge itself is a phase of reality, one of the facts in the sum of the facts which make up the world. I may even say that 'physical' process (the word is misleading: *in a sense* all processes are physical, *i.e.* natural, *i.e.* real, facts) becomes in beings constituted like myself 'neural' process and psychical process, only I must never think of any real process as more real than any other process. As there is no psychical process without 'physical' process, it is totally erroneous to say that perception is '*only* in me'—"only in" too is a *contradictio-in-adjecto*.

Hartmann sums up his doctrine about Perception in five propositions which constitute the antitheses proper to the theses of "Naive Realism," the real "Philosophical Refutation of Naive Realism". (1) What is perceived is one's own consciousness-content, that is, changes in one's psychical condition. The answer to this is that the psychical is only possible through organic movement which is the physical basis of perception of the real world, one thing in which may be the "self". (2) Whether there are things-in-themselves is a question lying outside the region of experience. Things-in-themselves may mean two things: (α) 'things' in the ordinary sense of the word, (β) the last structural elements of which the world is composed. The second of these meanings does not exist for sense-perception. (3) Whether our intuition and thought forms are applicable or not to things-in-themselves if we are to suppose such, lies outside the region of experience. This is a totally new point, which will recur below. Meantime, if it were true—which it is not—that I only know what is 'within' my consciousness I could never raise the question here formulated. (4) The world for me is

my subjective appearance world, which builds itself up out of my sensations and my unconscious and conscious intellectual functions. The first clause confuses the world with my interpretation of it (the 'world' is always the screen on which my subjective world exists); the second erroneously takes 'sensations' to be the elements out of which experience is built up and further introduces a new term into the problem —unconscious—of which below. (5) Whether there are or are not other worlds outside my subjective appearance world, lies outside the sphere of experience. This only means that the world has many aspects a few of which only are known to me.

I seem then to have found by reflexion on Hartmann's examination of Common-sense that the positions of Naive Realism, of Common-sense Perception and of Psychophysics, have all of them a basis in fact, and so far from being discrepant accounts of knowledge are really consistent and complementary: Naive Realism would stand for the simplest form of Perceptual knowledge wherever and whenever it is to be found; Common-sense for the imperfect knowledge of reality, which is developed and systematised by Science; Science helps to show how intimately knowledge is connected with reality by treating knowledge as itself a phenomenon of reality determined by an assemblage of conditions. The difficulty as to the relation of the 'psychical' to the 'material' elements entering into experience has been largely created by an imperfect analysis of the facts of perception. On the doctrine that Perception is of the real and that the existence of perceptions means the existence of perceptual continua, the question of the relation between the psychical and the physical becomes the relation between that form of reality which we call sense-appearance and the 'physical' system in general; psychical reality is itself a form of reality which like physical energy has many subordinate forms such as volitions, perceptions, &c., persisting in that conception of reality which has been found convenient for the purposes of Psychology: we might say that the world is a texture of continua or strata of different kinds which cross and run parallel to and dip into each other, the relation of these different strata or trends of reality to each other being the problem of knowledge in general. Even minds must be treated objectively—say, as objects which are also subjects. Thus in the end the relation of knowledge to reality becomes the question of the relation of one kind of reality to another, for all reality is related and knowledge as we have seen is a form of reality. Of course we come at last in face of a dual-

ism: that is there are more kinds of reality than one. To the idealist then who holds that we cannot know things, because, as Schopenhauer says, "Between us and things there always comes the intellect," we answer that we can know reality because intellect or mind is one of the things we can observe.

If I try to recount somewhat I may say: (1) Hartmann in his examination of Common-sense has been desirous to credit it with a theory; whether Common-sense has a theory or not seems to me extremely questionable. The fact that Common-sense takes its intuitions to be all original and immediate is of course to be traced to its ignorance, but out of this presumption can be disengaged the truth that knowledge is of the real. (2) Hartmann has tended to think of Common-sense under the light of the astonishment the common man feels when told of the facts of Science about his perceptions, *i.e.*, of Common-sense as making assertions against negations rather than as the basis of positive conduct: what the common man says to the teaching of science is of course not of the slightest importance; he is quite unable to interpret the facts the scientist brings before him. (3) Hartmann tends to think that in his doctrine of the subjectivity or immanency of perception he has laid his finger on the elements out of which experience is built up. The immanent perception means the localised perception, and that is rather a last stage than a first stage in knowledge. (4) There is no inconsistency between Common-sensism and the truth about the simplest form of knowledge.

III. I repeat here that if it is true that knowledge is only of the immanent and the subjective, by no conceivable rational process could the idea of things-in-themselves either in a positive or in a negative sense enter into the mind—and this apart from the fact that 'only immanent' or 'only subjective' is a self-contradictory conception. The idea of things-in-themselves represents what we might call the cardinal and structural fallacy of Idealism. I do not wish, however, so much to inquire how exactly Hartmann starting from the Idealistic hypothesis comes to the conception of things-in-themselves as to indicate how his examination of the forms of Idealism (which has a distinct value on its own account) is a step in the progress of his own thought. He of course would naturally say, as Schopenhauer substantially says, that knowledge must evidently be determined or accounted for by some transcendent or other, seeing that it is immanent and does not determine or account for itself. It is obvious that in this position two points of

view are implied: firstly, that of the introspective Solipsist; and, secondly, that of the observer of knowledge as a process in some brain or other. Fichte in opposition to both Schopenhauer and Hartmann is the consequent Idealist; holding that knowledge contained all distinctions in itself, he refused to explain knowledge by anything outside itself and postulated therefore the subject which returns upon itself by the force of its own self-activity. The idea that determines this step of his is that our knowledge of individual things and ourselves is only to be explained out of a prior all-inclusive knowledge in which the distinction of self and not-self meant no rift or absolute division, but was not therefore unreal but rather implicitly real; this prior knowledge he might have found in the fact of the primitive confused knowledge of Perception without going into the cloud-land of the movements of a subject which signify for us nothing that we can definitely verify. Hartmann has a good deal to say about Kant's attempts to get a thing-in-itself. He says rather aptly at one place that the Æsthetic of Kant reduced all reality to appearance (Erscheinung), but that the Logic goes a step further and reduces that remnant of reality, the appearance, to a still more problematical reality, mere semblance or show which is possibly illusory (Schein); this of course in view of the things-in-themselves behind the scenes. I do not wish here to say what the things-in-themselves in Kant are; it is enough to remember that in Kant himself there is the material for either an Idealistic or a Realistic interpretation of these entities (whatever they are). On the hypothesis that Kant is in general an Idealist, Hartmann finds, what most critics do find, that any attempt to make out a verifiable position or *rôle* for things-in-themselves is in conception inconsistent and illogical, and with infinite care selects and examines and finally rejects a number of striking passages in which Kant makes an attempt to reach a transcendent. He further distinguishes Consequent Transcendental Idealism, which rules out of court any positive assertions about things-in-themselves, from Inconsequent Transcendental Idealism, which, while recognising the ruling about the knowledge of things-in-themselves, yet makes exceptions in certain directions, and allows of a kind of knowledge of things-in-themselves. The three most important forms of Inconsequent Transcendental Idealism are Solipsism, Immaterial Spiritualism, and Monadology; each of these Hartmann admirably weighs and finds 'wanting'. The result which we are left with is therefore that on the principle of Idealism (Berkeleyan say, or Kantian) there

is no knowledge of the transcendent, of things-in-themselves, nor can we explain why we should be haunted with this spectre of our defeat: the world becomes not merely a *Hirngespenst* which has, say, the reality of a consistent dream, but a changing spectre, a will-o'-the-wisp which only mocks us with illusion (*i.e.*, Erscheinung becomes Schein). Hartmann summarises his criticism of Kant by saying that Kant instead of having succeeded, as he thought he had and as he intended in establishing the possibility of experience, has actually demonstrated the impossibility of experience. Let us write these words about the Idealistic hypothesis and we shall say the truth without being burdened with scruples about fairness of interpretation. Idealism began by the laudable attempt to show how knowledge of things was possible because reality in fact was *quasi*-mental in signs or appearances for our help only; but carried out into a system it makes knowledge lose itself in illusionism, in Pyrrhonism. One cannot praise too highly Hartmann's criticism of the Idealistic hypothesis; he calls it of course Transcendental Idealism, denoting by that the fact that it remains set fast in difficulties about what is 'outside the mind'. Perhaps it may be said that others have done this work as well as Hartmann; but the value of Hartmann's execution is not alone in its perfect sureness and definiteness, but in its also being the work of one who is himself a professed metaphysician. But now at once we come upon what is more difficult to think intelligibly than even the Idealistic hypothesis itself—the *further* attempt that Hartmann makes to get to a transcendent on the presupposition of the Idealistic version of the cardinal fact of knowledge. Instead of revising his 'first principles' as we might have expected he would, Hartmann goes further or attempts to go further on the same lines. Like Schopenhauer he thinks that in the Idealistic pathway we may and can strike into a second or quite other way of reaching the thing-in-itself; he says it is part of Schopenhauer's signal merit to have recognised the truth that a way other than the way of conscious knowledge might lead us to the goal of the *Jenseits*. This leads me to the Epistemological (as distinguished from the Metaphysical) aspect of "Transcendental Realism".

IV. *Transcendental Realism.* Transcendental Idealism having failed in Hartmann's language to construct for us a bridge between the immanent and the transcendent we have to test the bridge which Hartmann believes Transcendental Realism builds between these two poles of thought and

reality. I find myself unable to describe the theory any further without speaking of the proofs of it as an hypothesis: to say what these are is a matter of extreme difficulty—not that the proofs are not formulated with the persistent care which characterises Hartmann's work, but that it is difficult to read a real meaning into these proofs. If it can be shown, says Hartmann, that Transcendental Realism is the only hypothesis that accounts for the facts of knowledge and experience, there is a presupposition in favour of its truth: this might be called the Indirect Deductive proof. An Inductive proof of the hypothesis would exist if one could show: (1) certain facts on which it is based to begin with; and (2) that an inductive examination of the facts of experience leads to its principles. We shall immediately see that the Inductive proof is also only indirect. Hartmann has recourse to both these methods of proof; and is fair enough to recognise distinctly that in the end Transcendental Realism remains a hypothesis; holding, however, that the amount by which his hypothesis falls short of certainty could be represented by an infinitesimally small fraction $\frac{1}{\infty}$, he feels himself entitled to build a metaphysical system upon it. The indirect deductive proof he regards as given in his proof of the inadequacy of 'Naive Realism' and 'Transcendental Idealism' as explanations of knowledge. The material of the inductive proof is touched on in the *Grundproblem*, but is to be found *in extenso* in his other writings, chiefly in the *Philosophie des Unbewussten*, Hartmann's *chef d'œuvre* and earliest work.

After the rejection of Naive Realism as a completely untenable theory there remain the two forms of Transcendentalism (the only true Philosophy according to Hartmann): Transcendental Idealism and Transcendental Realism: either things-in-themselves are merely hypothetical or they are real entities. Three positions, says Hartmann, are possible in reference to these two theories: (1) the sceptical *non liquet;* (2) the assumption of Transcendental Idealism; (3) the assumption of Transcendental Realism. As I have indicated what Transcendental Idealism is, I shall at this point indicate also what Transcendental Realism positively means to Hartmann, in order that we may see between what theories our choice exactly lies. Hartmann, still influenced by the Idealistic postulate that what I immediately know is in myself, talks of being "in earnest" with the problem of getting to reality—to things-in-themselves; in short, what he does is definitely and shortly this. In spite of all he says and knows about the impossibility of making, on the principles

of Kant, a transcendent application of the principle of Causality, he finds in Causality a rope which pulls him out of the sea of Illusionism into which Transcendental Idealism has thrown him. But first he gives a 'dressing' to the Causal Principle to make it suit his purpose [we are reminded of Kant's dressing of the table of judgments]: we must not, he says, construe Cause in the narrow sense of a mere connexion of presentations among each other, but rather as the law of a conjunction of existent things in general (Gesetz einer Verknüpfung von Seienden überhaupt). This of course is a remarkably fine conception of Causality, but it begs Hartmann's point for him: he can now talk of having a tie between things in the mind and transcendent things (the 'transcendent' properly should not be a 'thing' or 'things'), one end of which [*i.e.*, the immanent] we have in our hands. Certainly there is a cause for our affections, or rather as Hartmann admirably suggests: our affections must be determined in relation to all other things; they must, but a "transcendent" cause does not show us *how;* it only states the law of connexion in general as fact. Still the cause of our affection is to Hartmann the transcendent, and we want to know what further knowledge we have of the transcendent. With the attribution to it of the category of cause the other categories follow as all applicable. Hartmann shows how each of the following categories apply: unity, plurality, substance, existence, necessity, space, time (in connexion with the two latter, as I said, he carefully refutes the arguments of Kant in the Æsthetic). Again, things-in-themselves are metaphysical realities, and Hartmann insists that his Philosophy is not only an Epistemology but a Metaphysic: he wants to describe things-in-themselves then as metaphysical entities. Indirect Deduction gives him the start: the transcendent cannot be 'object'; an object in itself is, on Idealistic principles, a contradiction: "it is a contradiction that I should be able to think something which is not my thought"; even with Kant's *intuitus originarius* we could not know things-in-themselves, the things in that case would still be only our representations: "only as elevated above the contradictions, first wrought by consciousness of subject and object, could it [the *intuit. orig.*] think the Absolute". Hartmann reiterates the cardinal articles of Idealism: "It is matter of indifference whether, with the materialist, one takes the other side of the conscious representation to be eternal matter, or with Berkeley . . . personal God, or with Kant an unthinkable x, or Idea, or Will, . . . in all this, the *fundamental Epistemological truth*

[*i, e.*, that knowledge is of the immanent] *is not in the least affected*"; and yet we have to remember that "He who acknowledges the argument that 'What I can think is my thought, so what is not my thought is to me unthinkable' is *irretrievably lost in Illusionism*".[1]

Out of this maze then every *sortie* from which is a *cul de sac* Hartmann saves himself by a leap similar to Schopenhauer, into another *genre* of fact altogether; he avoids Mysticism, that grave of knowledge, by assuming that the transcendent must be partly unlike consciousness and partly like it: "thought and yet not my thought"; "an ideality and yet not an ideality in my actual, present consciousness"; "a content like to my consciousness, and yet not that itself". In defiance of the rubric of Idealism he says: "Consciousness[2] reproduces through reflexion a thought-presentate, saying to itself that this presentate is not its present thought" (!). An intelligible meaning the sentence only acquires on the ground of the idealistic postulate. To what strait has the so-called *a priori* or ideal deduction of the real been reduced! At last the transcendent is pinned down as the "unconscious"—an excessively subtle double-thought; the 'unconscious' seems to fulfil the conditions just formulated; sweeping together *Panlogismus* and *Panthelismus*, Hartmann says that transcendent causality (the thing-in-itself) is an[3] "efficacious, unconscious, ideal happening" (Kraftvolles unbewusst ideales Geschehen). One cannot but ask oneself whether these four words mean so very much more than the measurable energy of the physicist. How Hartmann reconciles the unconscious with the plurality he attributes to things-in-themselves is the question of the consistency of his metaphysic, which does not concern me here. His Epistemology however seems to me to lead either into an unknowable something or to collapse on "the given," or the common-sense and the "common sunshine" he despises; I should prefer to pin him down to the latter (as simply matter for scientific investigation) for I reject *in toto* the roundabout way to reality through the porch of Subjective Idealism—ideas are only themselves facts to be determined in the ordinary way. As Schopenhauer says, "All knowledge is of itself and originally Perception"; the function of Thought or indirect knowing is not to create reality on its own account but to enable us to interpret the different spheres of reality immediately given to us in Perception by distinguishing

[1] *Grundleg. des Tr. R.*, s. 91.
[2] *Ibid.*, s. 91. [3] *Ibid.*, s. 92.

between them and enabling us to abstract one of these spheres for special and further examination.

I return to the two alternative forms of Transcendentalism. Must we choose between them? Not surely if Transcendentalism itself is an unreal alternative to, let us say, Realism. I have tried to show already that Naive Realism and Common-sensism have not a contradictory or a false, but only an incomplete knowledge of reality. There remains the Realism of Science; is that an account of Knowledge and experience which needs to be corrected by say Transcendentalism? Science explains psychical realities by reference to their physiological and physical and chemical conditions; that is it explains as it always does a specific set of conditions by reference to a more general set of conditions—here, what is in my brain by reference to what is outside my brain or by treating my brain as simply a part of reality. Is there any objection to this? and does not Hartmann do the same only in a different way? One plane of reality is by Hartmann and by the scientist explained by reference to other planes of reality supposed, not to be more real (that cannot be: all planes of reality are equally real) but to be better known or more easily observable. Now, practically what Transcendentalism really expresses is the fact that no one plane of reality can be regarded as really ultimate, but only as relatively so: we may always go from one kind of reality into another which may, according to the state of human knowledge at the time, be better known; in a word, we may go infinitely far in our study of the real. The tendency to regard one plane of reality as ultimate is one which the scientist and the metaphysician have in common; the tendency is only a tendency and will never reach a goal; it is only an expression of the fact that there is progress in knowledge and that new planes of reality are always being disclosed. An ultimate plane of reality would be the Thing-in-itself; but the Thing-in-itself will never be reached by us, as reality must be for us twofold in order that knowledge may exist; there is no Thing-in-itself: all things and planes of reality are RELATED. The scientist who explains psychical energy by chemical processes has of course not destroyed the fact of psychical energy, just as the idealist has not destroyed the reality of things by insisting that he must go through some purely psychical processes before he can know things. Idealism is the philosopher's *idolon*, just as materialism is the scientist's: over and against both stands the Transcendentalist who tells them that reality is not measured by only one of its planes. But Transcendentalism cannot be dogmatic;

it only expresses the fact of transition in knowledge and reality, just as Idealism and Naturalism draw attention to certain facts in experience: all three are aspects of Realism in the broad sense. Scientific Realism, and Transcendentalism are not incompatible. Hartmann's Transcendentalism was invented to get over or out of the "abstraction" of Idealism; there is a better way of getting out of Idealism than by this *salto mortale:* one should refuse to go into it; it is impossible to fly in face of fact and logic. Idealism is a false, an incomplete analysis of Perception.

Hartmann's assumptions have been: (1) The real is the transcendent. He thought this because he started from the idea that the 'given' real was the immanent. The given real is not the immanent, consequently the real is not the transcendent in the sense he took it to be. The real of course in Mr. Spencer's phraseology 'transfigures' itself. This is all that Transcendental Realism can really mean —Transfigured Realism. (2) Metaphysic is monistic, while Science is dualistic. But the fact remains that we are always in face of a dualism in *at least two* planes of reality. The unity of experience is the world itself as a whole: of what really "transcends" experience we have no knowledge. All the reality we know, spiritual and material, is IN experience. (3) That the isolated sensation is a fact. The isolated sensation is the localised perception; localised perception is accompanied by a sphere of relatively obscurer perception; the sense of the real is general; therefore the isolated perception is not a fact of experience, nor is the isolated sensation.

The results of our investigation in general are: (1) Dogmatic Idealism is an *idolon specus;* so therefore is the Transcendentalism invented to get rid of it. (2) Commonsensism is only an imperfect and not a contradictory account of reality; it needs only to be supplemented by the scientific. (3) Realism in the broad sense is not antithetical to, but inclusive of, Idealism. The Epistemological form of Scepticism is the product of the Idealistic hypothesis. That scepticism is the illusionism wrought by the impossible thesis that knowledge is a process which destroys itself: "We cannot know things because between us and things there comes the mind" means that we can never know things because in order to know them we have got first to know them, *i.e.*, to falsify them.

V.—DISCUSSIONS.

MR. BRADLEY ON IMMEDIATE RESEMBLANCE.

My agreement with Mr. Bradley that "the issue involved is one of very great and wide-reaching importance" must be my excuse for sending a word of comment on his paper in the January MIND. The text of his criticism is furnished by pp. 490-4, and 532-3 of vol. i. of my work *The Principles of Psychology*, and the exact question is this: Is the 'resemblance' which we predicate of two objects due in the last resort always to the operations on our mind of qualitatively identical elements contained in each? Or, may we, on the other hand, admit the existence, amongst our mind's objects, of qualities or natures which have no definite 'point' in common, but which we perceive to be, although numerically distinct, yet *like* each other in various degrees and ways? We so often discover later the exact point of resemblance in two composite objects which first struck us by their likeness as vague wholes, and we are so often able to name it as an identical portion in both, that the temptation to generalise lies very near; and we then say that there can nowhere be natures *immediately* like or unlike each other, and that every case of so-called similarity, even the simplest, must constitute a problem in analysis, which a higher discernment might solve. But since the higher discernment, methodically abandoned to this analytic quest, ought not to stop at any elements of which resemblance is simply affirmed (for the 'point' of this resemblance must then also be sought), it is obvious that the problem can only lead to one of two conclusions, either to

(1) The postulation of point after point, encapsulated within each other *in infinitum*, as the constitutive condition of the resemblance of any two objects; or to

(2) A last kind of element (if one could then say 'kind') of whose self-compoundings all the objects, and of whose diverse *numbers* in the objects, all the likeness and unlikeness in the world are made.

Of these two views of resemblance the former leads to a sort of Leibnitzian metaphysics, and the latter to what I call the Mind-dust theory.

My solution, or rather Stumpf's (for in my book I am but the humble follower of the eminent Munich psychologist), was to take neither of these objectionable alternatives, but (challenging the hasty hypothesis that composition must explain all) to admit

(3) That the last elements of things may differ variously, and that their 'kinds' and bare unmediated resemblances and contrasts may be ultimate data of our world as well as provisional categories of our perception.

Mr. Bradley is dissatisfied both with this thesis,[1] and with the arguments given in my book to support it. I care much more about the thesis than about the arguments, so I will spare the reader all cavil at my critic's treatment of the latter. In particular I abandon the *series*-business to his mercy, as being something inessential, for I am much more concerned with furthering understanding of the subject than with defending my own text.[2] As regards the thesis itself, Mr. Bradley quarrels greatly with the *simplicity of the elements* between which in the last resort it contends that bare unmediated resemblance may obtain. I did, it is true, assume in my text that the elements were simple, and I called them simple qualities, but I regard that as an entirely inessential point. So far as my thesis stands up for ultimate unmediated likeness as against likeness dependent on partially identical content, it makes no difference whether the last elements assumed to be like, are simple or complex. They must only not contain any identical point. In other words, complexes like *abc* and *def* might resemble each other by principle (3) as well as simple elements like *a* and *b*.

This clears up one confusion. But dire confusion still remains in my mind as to the rest of what Mr. Bradley may mean. He has a solution of his own which is like neither (1), (2), nor (3) as propounded above. He alludes to it abundantly, but dispenses himself from stating it articulately, or illustrating it by any example, because it proceeds from a principle which he imagines to be 'the common property of philosophic students'. Such oracular expression of opinion might fairly exempt one from the duty of nearer research, but the great debt I owe to Mr. Bradley's Logic makes me struggle in the hope of yet finding valuable truth. Mr. Bradley appears to hold that all likeness must be 'in and through a particular point'—at least he says so on page 85. Now call the 'point' *m*, and the two like objects *a* and *b*. If the *m* in *a* were simply *like* the *m* in *b*, that would be that simple resemblance over again with which Mr. Bradley is not content. But if we suppose the two *m*'s to be alike by virtue of another 'point,' finer still, that leads to infinite regress; and that again I understand Mr. Bradley not to favour. It then would remain open to say that the two *m*'s in *a* and *b* are *identical* in nature

[1] Or have I made a gross blunder, and is he dissatisfied really not with 'simple resemblance' but only with 'resemblance between simples,' on which, as I presently explain, I do not insist?

[2] One misapprehension, however, I may complain of. Mr. Bradley seems to accuse me of believing that the 'points of resemblance' which form the ground of similarity must be 'separable' parts of the similar things. *Discernible* parts are all that the argument requires; and I surely never implied that the 'points' in question must be susceptible of physical isolation. The accusation is so absurd that I fear I have not understood Mr. Bradley's text.

and only numerically distinct. But here again pure identity displeases Mr. Bradley, whose great principle is that "our one chance lies in maintaining the vital, the inseparable connexion at every point between identity and difference" (bottom of p. 88). Just how this principle works in the matter in question, Mr. Bradley does not divulge, and I wish that, instead of his pleasant irony about my familiarity with the dialectical method, he had himself given some exacter account. I have laboured with the greatest good-will to reconstruct his thought, but feel wholly at sea with my results. If he means simply the Hegelian commonplace that whereas neither the abstract sameness nor the abstract otherness of two objects can constitute likeness between them, the likeness must seek in the 'synthesis' of the sameness with the otherness its only possible mode of realisation, that seems to me but an excessively clumsy way of stating in terms of a *quasi*-miracle the very truth which Stumpf and I express by saying that likeness is an immediately ascertained relation. You cannot for ever analytically exhibit its *ground*, but must somewhere at last postulate it as there, as having already effected itself, you know not how. Nothing is gained for our understanding by presenting the process as a sort of juggler's trick, that, namely, of the seemingly impossible coalescence, of two contradictory terms; and therefore I cannot believe that the subtle Mr. Bradley has anything as innocent as that in his mind. Perhaps what I write may draw him from his reserve!

Of course there is a familiar path open to those who believe that likeness must be 'in and through a particular point,' and who yet deny that the 'point' can be in two objects the *same*. They can call likeness an 'Antinomy'; saying that all likeness of wholes is conditioned on that of their metaphysical parts, and that unconditionally like parts are unattainable, however long one may seek. But this leaves both immediate likeness and apparent identity as ever-recurring categories in our thinking, never to be expelled from our empirical world, and I submit that Mr. Bradley has not yet shown these categories to be absurd. 'Antinomies' should surely not be multiplied beyond necessity. The qualities of the things of this world, the 'terms' between which likenesses and differences obtain, are not supposed to be engendered by the summation of a procession of still more inward qualities involved within each other in infinite regression, like the whirls of an endlessly converging spiral that never reaches its central point. Why need we insist that the 'relations' between the terms, the likenesses and differences themselves, must be engendered by such an impossible summation or synthesis? How quality logically *makes itself*, we do not know; and we know no more in the case of the quality of a relation of likeness, than in that of the quality of a sensational content.

WILLIAM JAMES.

CONSCIOUSNESS AND EXPERIENCE.

The idea of writing a few remarks on this head was suggested to me by Mr. Ward's article on Modern Psychology. These remarks are not intended as a contribution to the subject, and certainly not as a hostile criticism. We must all feel grateful to Mr. Ward for his interesting discussion, and for myself I feel sympathy with its general drift. And, as Mr. Ward has not yet worked out his positive view as to the Subject, it would be absurd in me to offer to criticise that view beforehand. But what has struck me is that in the discussion assumptions are used which, if true, are very far from appearing self-evident. And, though in his own mind doubtless Mr. Ward is prepared with a defence of them, I do not find that he has done anything to prepare the reader. Hence I thought it might be well to call attention to some points which seem ignored, but which to my mind appear to be fundamental.

The main assumption seems to be the identification of experience with consciousness. Now, if by consciousness we understand the being of an object for a subject, this assumption, I should say, is at least disputable. To my mind consciousness is not coextensive with experience. It is not original, nor at any stage is it ever all-inclusive, and it is inconsistent with itself in such a way as to point to something higher.

(1) On the inconsistency of consciousness I can partly refer to Mr. Ward, but I must also state the case briefly in my own way. We have an object, a something given, and it is given to the subject. Is the subject given? No, for, if so, it would itself be an object. We seem, then, to have one term and a relation without a second term. But can there be a relation with one term? No; this appears to be self-contradictory, and, if we assert it, we must justify and defend our paradox. But, again, can a term be known only as a term of a relation or relations, while it is not, in any aspect, known otherwise? No, once more; this is impossible, and in the end unmeaning. Terms are never constituted entirely by a relation or relations. There is a quality always which is more than the relation, though it may not be independent of it. We may, of course, for certain purposes abstract and use working fictions, as we do, for instance, in the case of atoms and ether. But, outside natural science, it is a serious error to mistake these useful fictions for realities. And anything like a point without a quality in the end seems to be unreal, and "constitution by relations" a misleading phrase. But, once more, can we have a relation, one term of which is contained in the experienced and the other not? No; for a term, which is not in some sense experienced, seems nothing at all. If in itself it falls outside the experienced, then it appears to be unmeaning, and it cannot therefore consistently be said to exist.

Or at least we must continue to hold this, until our difficulties are met. And they are not met by the mere repetition of those every-day distinctions which we have been forced to set down as barely relative.

And now, leaving the terms, consider the relation. Is there, in the end, such a thing as a relation which is merely *between* terms? Or, on the other hand, does not a relation imply an underlying unity and an inclusive whole? And then, once again, must not this whole be experienced or be nothing? Here are points surely which at least require some discussion. But consciousness must lead to self-consciousness, where possibly these difficulties are lessened. If the object is given to me, then I also must be given, and on reflexion I so find myself. I find myself given not in the abstract but as concrete experienced matter. Both terms are now objects, experienced with their relation, and the question is whether the difficulties are now less. We must reply in the negative. The correlated terms are for a subject which itself is not given. The correlation falls in the experience of this new subject, which itself remains outside that object. And of the relation to this new subject the old puzzles are true. This relation must have two terms, terms more than their relation; and the "more" again must be experienced, or else be nothing. Any attempt to pass from within the experienced to that which in itself is not experienced, seems quite suicidal. The distinction between the experienced and experience seems in the end totally inadmissible. And the infinite regress is but an actual unremoved contradiction. It *is* itself an absolute irrational limit.

(2) The form of consciousness thus seems in hopeless contradiction with itself. But is it necessary to identify experience and consciousness? Here is a question which seems worth some consideration. Now consciousness, to my mind, is not original. What comes first in each of us is rather feeling, a state as yet without either an object or subject. Feeling here naturally does not mean mere pleasure and pain; and indeed the idea that these aspects are our fundamental substance has never seemed, to me at least, worth discussing. I have ventured to consider it an absurd perversion of the older view. Feeling is immediate experience without distinction or relation in itself. It is a unity, complex but without relations. And there is here no difference between the state and its content, since, in a word, the experienced and the experience are one. And a distinction between cognition and other aspects of our nature is not yet developed. Feeling is not one differentiated aspect, but it holds all aspects in one. And, though a view of this kind naturally calls for explanation and is open to objection, I am forced to doubt the wisdom of ignoring it wholly. For, if it is difficult, it seems hardly so difficult as to take, for instance, our inward Cœnesthesia as throughout our object. And a reference to Volkmann's book would show that it owns, more or less, the endorsement of well-known names.

But, if it is not false, then the identification of consciousness and experience is a wrong assumption.

(3) But consciousness at all events, it may be urged, at a certain stage exists. Doubtless, but feeling on this account does not wholly cease to exist, and the experienced is therefore always more than objects together with pain and pleasure. Everything experienced is on one side felt, and the experienced is, also in part, still no more than felt. I fully admit the need here for explanation and defence,[1] but I cannot admit that such a view deserves to be ignored. The real subject, we may say, is always felt. It can never become wholly an object, and it never, at any time and in any case, ceases also to be felt. And on this felt background depends the unity and continuity of our lives, lost hopelessly by Associationism, and lost no less hopelessly by the identification of experience with consciousness. Our personal sameness consists in the ideal identity and the continuity of the experienced. Nothing more is wanted, and anything more, if it were possible, would, at least so far as we are concerned, be nothing. And the opposite of this, I venture again to urge, should not be assumed as self-evident.

For, in dealing with the puzzles of consciousness and self-consciousness, the difference brings important consequences. Those puzzles consisted in the internal difficulties of the relation and its terms, and then again in the fact of the relation itself. An experienced relation seems to involve an experienced whole, but this whole is at once supplied by feeling. For consciousness is superinduced on, and is still supported by, feeling; and feeling is itself an experienced whole. And the difficulty of the relation and its terms might from the same basis be dealt with, though naturally I cannot attempt to work this out here. I will however try briefly to point out where the solution lies. There is a doubt, first, whether consciousness must imply self-consciousness. Can there, in other words, be an object, unless that object bears the character of a not-myself? In this latter case the "object" itself will be but part of the whole object, for it will be given as one term in relation with another given term. This question to some slight extent, perhaps, is one of language, but for our present purpose it may be left unanswered wholly. The solution of the problem in any case remains the same. And that solution lies in the fact that between the felt subject and the object there is no relation at all. Whether the object contains, or does not contain, a self and not-self in connexion, on either view there is still a real felt subject. And the object qualifies this subject, but

[1] One point to be noticed is that the products of relation and distinction apparently come to be experienced without their process. In this way relational complexes may be experienced immediately, and, in a secondary sense, felt. Such felt masses can be attached to the object of consciousness, but to a far larger extent they qualify the background.

there is emphatically no experience of a relation between them. And when by reflexion a relation seems given, the experience has been changed. That relation is now part of a new "object"; and with that new object we have a felt subject, with which it is experienced, but to which it is not related.

The above statement, I am well aware, calls for much explanation, but the only proper explanation would be a full treatment of the matter. What an "object" is, and how it differs from the rest of the experienced, how a content becomes an object, and how the transition is made from feeling to consciousness—these are problems which in a small space could not be dealt with. But, assuming an object in the sense of a something *for* me, I will say a few words on this preposition. The word "for" without doubt asserts a relation, and in addition it asserts a relation in space; and, if so, clearly in language I contradict myself, when I deny that the object implies a spatial or any relation. And, if all metaphors are to be pressed, then I, and I think all of us, in the end must keep silence. But the question surely is whether such a contradiction is more than formal. And the question is whether on some matters, in order to speak accurately, one has not to use metaphors which conflict with and correct each other. Believing this to be the case I repeat that the felt subject, in and for which the object exists, is not related to it and yet is experienced with it.

The object in self-consciousness (for it is better to take that stage at once) is two concrete terms in relation with each other. The whole of it consists in content, in presented elements more or less qualified and extended by thought. What the content is on each side is not here my concern. My concern is to deny that this whole "object" is related to the subject, and yet to assert that it is there for the subject and present in it and to it, and that the subject itself is also experienced.

The object-content is no longer in unbroken unity with the felt whole, but this breach itself is not, and cannot be, an object. It can become an object for reflexion; but, in becoming one, it generates a new experience and a fresh felt subject. The subject always is felt, and neither itself, nor its actual distinction from the object, can be got out and placed before it as an object. And there is no distinction here between the experience and what is experienced.[1] For the subject always is experienced because it is felt.

[1] For the outside observer, I may be asked, is there no distinction of this kind? Unquestionably there is, but *what* it is, is a matter for discussion. If the observer takes the experiencing subject to be more than what is at one time experienced, taken together and in connexion with its experienced past—he may possibly be right. But I must remind him that, if he assumes this, he is not *arguing* against any one. He is merely assuming without argument that he is unquestionably right and we are certainly wrong.

This view, briefly and, I must confess, obscurely indicated, does not of course remove all difficulties. But the difficulties it leaves are, I believe, not more than difficult. The elements we must deal with are at any rate contained in one world. While to make a passage in any sense from one world to another will remain, I venture to think, entirely impossible. And this view, again, is surely not *prima facie* absurd. It is hard for one, who like myself learnt and tried to teach it now many years ago, to judge on this point, but I would appeal to the reader. Take such an experience as ordinary desire. Beside pleasure and pain we have in this state, I presume, a relation of something, that is, to an idea in me. These terms we may certainly agree to call objects, and, in some cases and in one sense, we may agree also to say this of the relation between them. But, beside the above, is there nothing experienced in desire? I should say, yes, the whole experience is felt as one, and in that unity there is a background which is not an object. Desire, for me, is a felt whole containing terms and a relation, and pleasure and pain. But it contains beside an indefinite mass of the felt, to call which an object strikes my mind as even ludicrous. And I would ask the reader if this view is so irrational that it may safely be ignored, and that the opposite of it may, without any discussion, be assumed.

And my purpose in writing is not at present to explain and justify this view, but to emphasise the fact that it exists. And I would venture on a respectful remonstrance against approaching these questions with undiscussed alternatives. I do not suggest that Mr. Ward is not familiar with all that I have set down, or that in his own mind he is not fully prepared to deal with and dispose of it. But his readers, I think, are left without information. And the consequences, if so, must be injurious to the study of philosophy. When, for example, Mr. Ward assumes, or appears to assume, of unity and continuity, that, because they are not in separate presentations, they are in, or come from, a subject outside the experienced—he can hardly realise the nature of the shock he administers. For unity and continuity, many of us have learnt, are always ideal. They consist wholly in content, or else they are nothing. And they come from content, or else they do not come at all. And any assertion of the opposite, we are ready to contend, is inconsistent with itself. We may be mistaken doubtless in all this, and Mr. Ward doubtless is prepared to show us how our positive doctrine is wrong, and our negative criticism mistaken. And when he produces, as I hope he soon will produce, his doctrine about the Subject, and its true connexion with the change and sequence of phenomena, I trust he will take some account of our errors. I do not know what his doctrine will be, but it could hardly lose in clearness if it were defined against such criticism as, I presume, Hegel would have launched against it. And I do not say this for myself, who claim

no right to assistance, and whose mind is, I suppose, presumably ossified. But with regard to the younger men, some of whom are growing up more or less in the same general view, the case is different. And they will hardly be helped by a tacit assumption that their conclusions, positive and negative, are not worth discussing.

As for the Associationist, if he is not confuted, he surely never will be; and I am sure that, however much confuted, he will never be convinced. Our business is, I suppose, not to be troubled about that, but to try to gain a positive result which on all sides will bear criticism. And is it not almost time to say, Let the dead bury their dead? But, whether in metaphysics or in psychology, perhaps I hold the Associationist far cheaper, and differ from him more radically than Mr. Ward would think justifiable. For in principle Mr. Ward, I should say, has not broken with Associationism. The question of principle, to my mind, is about the nature of the universal in being and knowledge. But with that question Mr. Ward, as soon as he makes a serious attempt to work out his view of the identical (?) subject, will have to deal. Then I may find that these well-meant remarks have been superfluous, since any truth they may contain has been included and provided for. I offer them, notwithstanding, in the meantime, not as hostile criticism nor yet as positive doctrine. For I admit that there are difficulties attaching to the problem, which I cannot at present, to my mind, altogether remove. But I offer the above as some considerations, which ought not, in any case and by any view, to be quite ignored.

F. H. BRADLEY.

THE ORIGINAL DATUM OF SPACE-CONSCIOUSNESS.

Messrs. Ward and James have maintained that the only original element in our space-perceptions is "massiveness" or "extensity" and that distance and position arise from a subsequent elaboration of this primitive material, either as in Mr. Ward's opinion through its connexion with motor experiences, or as Mr. James seems to say simply through the mental processes of "discrimination, association, addition, multiplication and division, blending into generic images, substitution of similars, selective emphasis, and abstraction from uninteresting details".

The question which I have to propound is this: how much does the conception of extensity involve? It would appear that "extensity" means quantity of sensation: that this quantity or quality of more or less is due to the number of distinct sensations received by the various nerve-endings simultaneously excited, and consists of partial presentations differing not in visual or tactual quality, as the case may be, but in "local sign". And the presence of this variety of local signs gives a sensation the character of extensity or *merged plurality*. If I understand the theory aright extensity is not, as the language used by its exponents occasionally suggests, a new and special character of "sensation," but simply implies the *coexistence* of individually distinct sensations *identical* in sensuous quality. But a serious difficulty arises when we examine into the nature of those "local signs". It appears to us that whatever interpretation be given to the term they are utterly inadequate to furnish a foundation for the perception of position. Is the local sign continuum a system of mutual relations or simply a mass of unrelated[1] sensations or feelings?

Mr. Ward tells us in one place (*Encyc. Britannica*, art. "Psychology") that the "local signs" consist in the different relations of the parts of a massive presentation to the whole. If this is so, the local sign involves a relation of position more or less vaguely apprehended between the several parts. For since the whole is the sum of its parts the relation of each part to the whole gives us at once the relation of each part to each. Surely a theory which assumes thus much has not a very difficult task before it. And even granting that the local sign is such a relation we may well ask how it comes that the physiological peculiarities of nerve-endings can possibly give rise to the consciousness of a relation (other than that of likeness or difference).

But we do not think that Mr. Ward means this: indeed he repeatedly describes the local sign as merely *qualitative* and sometimes refers to it as "local colour". Mr. James too is quite clear on this point: he emphatically states over and over again

[1] That is except in the way of similarity and difference.

that the local sign is not a relation but a sensation which becomes the sign of a relation.

Good. The local sign is not a relation: but shall we fare any better if it is a quality of sensation? If the local sign continuum is a mass or multiplicity of coexistent sensations, surely nothing in the way of space-relation can be got out of these, manipulate them as you will. Mr. Ward himself admits this when he says: "The longer we reflect the more clearly we see that no combination or association of sensations varying only in intensity and quality, not even if motor presentations be added, will account for the space-element in our perceptions". If then the basis of this "extensity" which Mr. Ward invokes to help him on is only a further difference of quality (local quality this time), of what avail is this auxiliary?

So we see that if the "local sign" is a relation it includes all that is to be deduced; if it is a sensation the theory breaks down.

Perhaps however these objections will not directly dispose of the theory in the special form in which it is maintained by Prof. James. According to him the only original space relation is that of magnitude or extensity. The relation of position or distance is a feeling, *viz.*, the feeling of the line connecting two points. The two positions owe their duality to distinctness of local sign and their position to the "extensity" and local peculiarity of the feeling which connects them. "The feeling is the relation." I do not believe that Mr. Ward would acquiesce in this statement of the theory, but it is certainly a correct statement of Prof. James's account of space relation. But surely the question arises: "If the line is a feeling, what is the relation between this feeling and the two points which it connects?" Our reply of course would be: that of "besideness," of local contact, which we consider must be postulated as a primary datum. We do not see what answer would be open to Mr. James. We put forward in brief the following dilemma. The local sign is either given as a relation or as a quality. If the former, the relation of position must be original and the development theory is superfluous. If the latter, the theory fails.

It should be added that Mr. James himself appears to have been aware of the difficulty here raised. We do not understand his answer: he seems to be rather disposed to treat the difficulty after the manner of a certain great thinker who has preceded him, and throw it over as a final inexplicability. But he does say this much: "Even if position be not an intrinsic character of any one of those sensations we have called local signs, we must still admit that there is something about every one of them that stands for the potentiality of position and is the ground why the local sign when it gets placed at all gets placed here rather than there". (*Principles of Psychology*, vol. ii. p. 164 note.) I cannot, however, see that this is an answer to our objections.

E. FORD.

THE IMPORT OF CATEGORICAL PROPOSITIONS.

I should like to be allowed to make a few remarks on the view of the meaning of Categorical Propositions which is put forward by Mr. W. E. Johnson in an article on the Logical Calculus, in MIND for January, 1892.

Mr. Johnson says that "the usual logical analysis of the predicative-term into *copula* and *predicate-term* is not fundamental, and is in some respects particularly misleading" (p. 23). It seems to me, on the contrary, that this analysis (if we take care not to confound *Term* and *Term-name*[1]) is both enlightening and fundamental—that it goes to the root of the matter. And I say this because the analysis in question brings into prominence what I regard as the very essence of Categorical statements—namely, the reference (in affirmatives) of two terms to one object, in such a way as to indicate that the object (or group) pointed out by the one term has also the characteristics signified by the other—the proposition thus expressing an explicit analysis in synthesis, a *diversity* of characteristics in *one identical* object or group. This is possible only if each term is regarded as possessing denotation (or application) and at least a minimum of signification. The identity-in-diversity interpretation is wholly different from the "class-inclusion" interpretation, in which we are concerned with relations between classes, or between individuals and classes, and *not* between Subject and Predicate of the Proposition. *S is P* is the only really general formula for Categoricals; and if it means anything, it means that S and P have reference to *one* object, regarded as of such qualities that both S and P can be applied to it. Every Categorical *can* be put into this form; and every Categorical before it is converted *must* be put into this form. The identity-in-diversity interpretation of Categoricals seems to me to be as far as possible from "getting rid of the predicative element" (indeed I do not see how this can be done on any interpretation).

Mr. Johnson says that in the only case in which the copula has a real logical significance, *e.g.*, in such propositions as *Tully is Cicero* (1), *Courage is Valour* (2), *is* is a relative predication—(1) and (2) being logically on a level with *Brutus loves Cæsar* (3). From my point of view, however, the difference between (1) and (2) on the one hand, and (3) on the other, is considerable—since in (1) *Tully* and *Cicero* and in (2) *Courage* and *Valour* have identical application, and neither (1) nor (2) *can* be regarded (while (3) *may*) as expressing a relation between two distinct objects—(3) being thus capable of furnishing a very much larger number of Immediate Inferences than (1) or (2). But though I accept

[1] In All R is Q, All R is a *Term*, and R is a *Term-name*.

the identity-in-diversity interpretation, so far from wishing to give *Tully is identical with Cicero* as the explanation of *Tully is Cicero*, I should consider the *is-identical-with* as so tautological and superfluous as to be absurd—identity being necessarily implied by the copula *is*. I do not see why the copula should be stigmatised as "a merely verbal device"—in a certain sense, no doubt, all words are a verbal device; but I do not see that the copula is a device in a worse sense than other words.

I should quite agree with Mr. Johnson that "Subject and Predication are distinct categories"—as distinct as *above* and *below*, *concave* and *convex*, and as mutually involved—and the distinction between S and P in *S is P* is not obliterated even in Conversion; on the contrary, current thought and speech fully recognise and even emphasise it, obliging us to drop quantification before the Predicate and to insert it before the Subject (when we are using Class-names), regarding, *e.g.*, *Some Q is R* as the converse of *All R is Q;* and thus forcing the denotation (or application) aspect into prominence in the Subject, and the connotation (or signification) aspect in the Predicate.

I cannot accept Mr. Johnson's view that "the realm of Predications and the realm of Subjects are not . . . precisely analogous. *The former may exist without the latter*,[1] but not conversely." As far as I can see he does not advance any arguments which prove this view. He says indeed that "with respect to any subject whatever there must be *some* predications which can be joined with it, so that if some are denied there must be others which can be affirmed of it.[2] But we cannot say conversely with respect to any predication whatever, that there must be *some* subjects with which it may be joined. Hence after denying it of some subjects, there may be no other subjects of which it may be affirmed.[3] A subject is that of which something must be predi-

[1] The italics are mine.

[2] This appears to me to be evident without proof, and to amount merely to this, that everything has some characteristics.

[3] How can that be a *predication* which is not predicated and cannot be predicated, of anything? Every predication-term must imply some reference beyond itself; if it is not and cannot be predicated of anything, to *what* does it refer? Of course in all predication there is possibility of error; but it appears to me that error comes in *not* in implying reference to *some* subject, but in implying reference to some subject which is more or less wrongly characterised, *e.g.*, in referring to *one* subject attributes which should be divided among *two*, as in speaking of *a round-square*. Unless in any proposition *X is Y* there is an implication or postulate of some subject (of attributes) in which X and Y are co-inherent or combined, *what* is, or can it be, that is referred to? If X and Y have any force, they would, I suppose, be allowed to 'connote' the properties or characteristics X and Y, and a combination of properties X and Y can only occur in a subject of which both are attributes. Even if the speaker's object is merely to deny the occurrence of things which are XY, this can only be done by first *postulating* such things. It is plain that if I

cated. But a predication is not necessarily predicable of some subject."[1] If *Subject* means one of the parts into which a Categorical Proposition is analysable, then I understand 'Subject' to be a Relative Term of which the Correlative is Predicate (or Predication). And in this case, not only is a subject "that of which something must be predicable," but it is that of which something actually is predicated. Correspondingly, a Predicate or Predication would be something which *is* predicated of a Subject.

If *Subject* means something which has Attributes, then again it is strictly Relative, the Correlative Term being Attribute. And whether *Predication* means Attribute (Characteristic) or Attribution (Predicate)—and I don't know what else it can mean—it appears to me to be a strictly Relative Term. I cannot, therefore, admit that "a predication may exist in its own peculiar realm without ever being found to attach itself to any Subject". Nor do I see that this view is supported by the consideration (even if we admit it unreservedly) that "the negation of a *proposition* attaches itself to the predication". For when we deny a Predicate or Predication, we deny it *of a Subject*—just as when we affirm a Predication, we affirm it *of a Subject*. If the Subject by itself is "empty," the Predication by itself is "blind". But, moreover, it hardly seems that we *are* restricted to this mode of negating a proposition. In the ordinary E proposition, the negation is sometimes regarded as attaching to the Subject. *Tom is the tallest* might be negatived by *Dick is the tallest*—or *Socrates is a traitor* by *Not Socrates but Lycon*. I do not quite see why in this connexion common thought and usage should be appealed to, while in other places they are apparently ignored—as when it is said that a predication is not necessarily predicable of a Subject, or that *All X is Y* means *Every Subject is Y if X*. Further, if we apply to the proposition *Every Subject is Y if X* the propositional analysis by which it has itself been extracted out of *All X is Y*, we seem to be involved in the "infinite process of substitution" with which on p. 23 the Identity interpretation is reproached.

"The existence of a Subject," Mr. Johnson says, "is . . . a presupposition of significant judgment." So far, so good. But because (in his view) there may be predications which do not imply subjects, the proposition *Every X is Y* (for instance) must be

speak (or think) of XY's, XY's must 'exist' *somehow*, *in idea*, in my mind, otherwise the denial or affirmation of XY's would be alike unmeaning. And since they must thus *indisputably* in any case 'exist' *in idea*, it must be some other 'existence' which is postulated, whether for affirmation or denial.

[1] *Cf.* p. 29: "There remains always the stuff, substance, or matter on which the predications must hang". *Cf.* also p. 25: "The application of the name [a purely denotative single name] is to *one*—neither more nor less—namable object, whether this be subject or predication".

understood to mean *Every Subject is Y if X*—the 'existence' of Subjects, but not of Y's or X's, being implied. "Every Subject" means "*the aggregate of all individual subjects*,"[1] an "aggregate of individuals in the background ready to receive" connotations. (*Subject* is itself a predicative name,—*i.e.*, a name that implies characteristics, and that may be predicated.)

Must not the aggregate of Subjects of Attributes (unless limited in some arbitrary way) include *everything*, not excepting the Attributes? *How* is such an Aggregate defined or known? What does it mean? If it is defined by reference to 'existence,' it cannot be existence in the most general sense that is meant, but must be existence limited in some way—and we require to know in *what* way. Perhaps one way would be by reference to the names which our language supplies; and in as far as our Subjects and Predicates are or represent such names, the reference to this aggregate seems immediate.

But it might plausibly be maintained that the aggregate so determined is arbitrarily and unwarrantably limited—that Thought (not to mention 'Reality') may transcend all current (and even all possible) Language.

The point of the whole hypothesis appears to be a reconciliation of the admission that "the 'existence' of a subject is a presupposition of significant judgment" with the view that propositions of the form *All X is Y*, &c., do not imply the 'existence' of X (while, *e.g.*, *Some X is Y* does imply it).

It is noticeable that in admitting that for significant assertion there must be reference to a Subject, Mr. Johnson introduces a very important modification of the view of Dr. Venn and other logicians who prefer the "existential" interpretation of Categoricals.

With the extreme interest of the whole article, and the ability and originality by which it is marked, I am not now concerned; my object is merely to dispute a view regarding the import of propositions, which I hold to be erroneous. I think that Mr. Johnson has done for it the best that can be done, but I still find myself unable to accept it.

E. E. CONSTANCE JONES.

Miss Jones writes that "S is P . . . the only really general formula for categoricals . . . means that S and P have reference to *one* object, regarded as of such qualities that both S and P can be applied to it". There appears to me to be here the same antithesis which I have expressed by the words *Subject* and *Predication*, but which Miss Jones expresses by the terms *object* and *quality*. Miss Jones' letters S and P contain in their signification certain characteristics which, being diverse, constitute *two* predications. The *one* object to which these diverse character-

[1] Here *Subjects* = Subjects of Attributes.

istics are applied, I call a *subject*. The difference, then, between her view and mine would appear to be that, whereas I hold that the simplest form of proposition involves the reference of a *single* predication to a subject (*i.e.*, a subject-thing, not a subject-word), Miss Jones holds that every proposition involves the application of a diversity of predications. Using Miss Jones' phraseology I would maintain that a proposition is possible, which means "that P has reference to an object, regarded as of such a quality that P can be applied to it": or more briefly, "the simplest judgment is the reference of a predicate P to a subject-thing". My view will be brought out by reference to a further statement of Miss Jones', *viz.*: "It is plain that if I speak (or think) of Xy's, Xy's must exist *somehow* in idea in my mind". As I understand this statement it expresses exactly my view. For this being so, the *proposition* "Xy's exist in my mind" is non-significant as a judgment; every significant judgment must refer to a kind of existence *other* than an existence in my mind; and hence a predication is not necessarily predicable of some subject, *i.e.*, of some existence other than an existence in my mind. My contention is that the 'subject-thing' is not "in my mind" in the same sense that the predication is necessarily "in my mind". Hence when Miss Jones urges "that in the process by which 'All X is Y' is interpreted, we seem to be involved in the infinite process of substitution," I reply that the form "Every Subject-thing is Y if X" cannot be further resolved, because whereas X and Y are predication-terms, "the subject-thing" is *not* a predication-term. Subject and Predication belong to different categories in a sense which *cannot* be applied to above and below, or to concave and convex. Miss Jones again urges (in a parenthesis) that "Subject is itself a predicative name, *i.e.*, a name that implies characteristics and that may be predicated". My answer is that, if there is a difficulty here, I do not see that Miss Jones' own analysis of the proposition avoids the difficulty. The word "object" is a predicative name: what characteristic then is connoted by this name when Miss Jones writes "S and P have reference to one *object*"?

There is one minor point in Miss Jones' criticism to which I ought to refer. Miss Jones says, "When we deny a predication we deny it of a subject, just as when we *affirm* a predication we affirm it of a subject". This is certainly my view; but it does not follow that when we can *apply a meaning* to a predication-word, that we thereby *affirm* it of a subject. Moreover, since we can in judgment either affirm it or deny it of a subject, why is it not possible to deny it of *all* subjects? The illustrations given by Miss Jones in this connexion do not seem to me to be relevant; for the pairs of propositions: "Tom is the tallest," "Dick is the tallest," and "Socrates is a traitor," "Lycon is a traitor," are not contradictory but contrary pairs.

W. E. JOHNSON.

VI.—CRITICAL NOTICES.

Eine neue Darstellung der Leibnizischen Monadenlehre, auf Grund der Quellen. Von EDUARD DILLMANN. Leipzig: Reisland, 1891. Pp. x., 525.

"The time has come," wrote Schelling nearly a century ago, "to rehabilitate the philosophy of Leibniz. His mind disdained the fetters of the school: no wonder that he has survived amongst us only in a few kindred minds, and with the rest has long become a stranger. In him was that universal *mind of the world* which reveals itself in the most various forms and spreads abroad life wherever it approaches. Doubly unendurable, therefore, is it, when people claim that only now are we finding the right words for his philosophy, or when the Kantian School foists upon him its inventions,[1] and makes him say the very opposite of what he taught. Nothing could be further from Leibniz than the speculative chimera of a world of *things*-in-themselves, which, though no mind perceives or apprehends it, yet operates upon us and produces all ideas in us. The principle he started from was 'that the ideas of external things sprung up in the soul, in virtue of its own laws, *as in a private world*,—as if nothing but God (the infinite) and the soul (the intuition of the infinite) were to the fore'. In his latest writings he continued to maintain the utter impossibility of an external cause acting upon the mental interior, —to maintain, therefore, that all alterations and vicissitude of perceptions and ideas in a mind can only proceed from an internal principle. When Leibniz said this, he spoke to philosophers. Now-a-days people have forced their way into philosophic life who can appreciate and understand anything but philosophy. When the statement is made, therefore, that no idea can arise in us through operation from without, there is no end to the astonishment. It is now regarded as philosophic to believe that the monads have windows, by which things can step in and out."

Apparently the time which Schelling anticipated was to be much longer delayed. The generation that followed 1797 was too much preoccupied by its own creative work to leave time for building sepulchres to the prophets. Still less was rehabilitation likely during the philosophic *débacle* when the converging hosts of scientific specialism and political doctrinairism crushed the feeble epigoni who tried to live on the repute which the great days of speculation had left them. The few who survived the crash that befel philosophy in the middle of the century sought a *modus vivendi* with the dominant powers, and consoled themselves

[1] Kant himself began the mischief by his alarming and rather indefinite charge that 'Leibniz intellectualised phenomena'.

with the surrogate of Kant-philology till the tyranny was overpast. But whatever risk there be of the study of Kant leading off into the bogs and wastes of verbal criticism and the immense misery of philological *raisonnement*, it has always the merit of forcing a capable mind to go beyond itself. Such a mind will either go forward to the thinkers whom Kant awakened and who carried his morning into full day,—or go backward to that earlier day which preceded the great dogmatic slumber of the eighteenth century—to those thinkers in the close of the seventeenth century whose best work Kant's harsh dicta had buried under an undeserved obloquy. In the former direction the influence of Schopenhauer has been largely for good. His ideas, long dormant, at last roused the tone of philosophic thought from its scholastic or professorial level to a higher note of speculative interest: unwittingly, indeed, he kept alive the influence of those post-Kantian giants whom he so loudly decried, though he was in reality their fellow-worker. And Von Hartmann, always stimulating and progressive, has still more effectively helped to expand the conception of philosophy, and to rescue it from inertia and degradation. The ignorance—to call it by no severer name—which even intelligent teachers of philosophy in Germany show of the work done between 1792 and 1827—which lets them quote an alleged dictum of Fichte or Schelling as the non-Orientalist quotes an inaccessible treatise of the Vedanta, and makes them do again tentatively and with self-admiration what was well done already—this ignorance is slightly diminishing. It is instructive, *e.g.*, to note the progress which an acute and fair-minded writer like Professor Paulsen has made in this matter during the few years that have elapsed between his "Ethics" and his "Introduction to Philosophy".

Of the greater pre-Kantian thinkers Leibniz has received less than his fair share of research. The literary revival which was contemporaneous with the Kantian Criticisms found itself most attracted by Spinoza: Goethe, in particular, deriving (in his own judgment) from the *Natura seu Deus* of Spinoza a creed of self-restrained and self-developed individualism which he might have —at least as truly—attributed to the philosopher of Hanover. Yet German patriotism has not been slack to gather the vast harvest which Leibniz's literary remains offer to the industrious. Circumstances have, however, made the task of reconstituting the *disjecta membra* more than usually tedious. The most definite and original statement of his characteristic doctrines was long to be sought for in unedited letters and occasional papers,—essays in periodicals, and summaries made to gratify princely curiosity or to invite scholarly examination; and these frequently bear on them the stamp of obliquity and accidentality incident to their origin. The *Nouveaux Essais*—a section-by-section summary and commentary of Locke's Essay—did not appear till 1765, when they were included in Raspe's collections of his works. The *Monadologie*—perhaps the most cited of all his works—did

not appear in its original French before Erdmann's publication of the *Opera Philosophica* in 1840.[1] It is on that excellent compilation that all the recent accounts of Leibniz's philosophy have been professedly founded. But some important additions were made by Grotefend in 1846,—notably including that '*petit discours de métaphysique*' (dated 1686) which contains one of the earliest and best statements of his fundamental ideas.

In 1890 a new edition, in seven vols., of the *Philosophische Schriften* by Gerhardt was at length completed. It is on the materials supplied by these handsome volumes that the work under review, 'A New Exposition of the Leibnitian Monadology, based on the original Sources,' by Dillmann, has been put together. The book sets before itself a double task. In a large part of the text and in a series of lengthy footnotes it contains a serious and detailed indictment of the accuracy of the accounts given of Leibniz by Zeller in his *Deutsche Philosophie* (1873) and by Fischer in his *Neuere Philosophie*, ii. (latest ed. 1888). Zeller and Fischer in the main, however, only figure as specimens of the general or conventional interpretation: Zeller perhaps representing the more superficial, but at the same time more conscientious historian of no special philosophical penetration, while Fischer stands for the imaginative reconstructor whose picture gains symmetry at the expense, occasionally, of authenticity. But, besides this, Dillmann aims at giving an exposition of Leibnitian monadology which shall show the genuine features of the system and demonstrate the groundlessness of the charge that it is inherently inconsistent. For, as Hegel said long ago, at first sight 'the Leibnitian system looks less like a philosophical system than a hypothesis as regards the ultimate nature of the world,—like arbitrary statements uttered in mere succession,—a philosophical romance,' and 'you do not properly appreciate it till you see what he thereby sought to avoid'.

The book labours under the disadvantage of being too prolix for a pamphlet, and too polemical for an exposition. Nor does the writer favourably engage the reader by his literary art. His utterance is often laboured, involved, and fails to come to a sharp point. He repeats his issues with insistence more emphatic than luminous, and puzzles the reader by the want of terse terms to distinguish the view he advocates from the views he condemns: and he is suspiciously ample in his pronouncements of one interpretation to be palpably clear, and another to be *grundfalsch*. Yet with all these drawbacks his book formulates a grave list of mistakes in the current representation of the Leibnitian theory, and does much to vindicate for its real doctrines a character of entire reasonableness.

[1] Convenient texts both of the *Monadologie* and of the First Book of the *Nouveaux Essais* have been edited by E. Boutroux, provided with *ample introductions and notes* for the use of students (Paris: Delagrave).

According to Dillmann (p. 18) ' the expositions of Leibniz up to the present day are not so much a work of impartial study of the sources as a product of tradition,' or of a study so superficial and so misled by false conceptions that it never really reached the simple truth (p. 386). The genuine philosophy of Leibniz is still, he urges, a secret: Leibniz himself has been a unique specimen of the misunderstood philosopher, both in his lifetime and amongst posterity. His radical problem—' May not mechanism, in spite of the justification of the mechanical explanation of all particular physical phenomena, be itself of metaphysical origin, and may not the principles of body itself belong to the metaphysical sphere ? '—is declared to be one ' so alien to the ordinary mind that in the whole history of philosophy up to the present day it has never been proposed except by Leibniz, never by any other philosopher ' (p. 288). A sweeping remark which it would need a violent ingenuity to verify,—which suggests the *Homo unius libri*, and receives some light from the fact—rather a refreshing sign in these days—that the very names of Kant and his successors never occur in these pages.

If we ask how this persistent misconception of a philosopher's meaning can be accounted for, the answer given by Dillmann is that the expositors have founded their account upon the *Monadologie* of 1714, instead of drawing it from an impartial and comprehensive examination of all relevant documents, particularly those of the earlier period, and above all, the writings which date from about the year 1686, when the Monad-theory had assumed its definite form. For, says Dillmann, ' the *Monadologie* is nothing more than a solitary attempt in which Leibniz seized the opportunity of trying to present, as an *a priori* deduction from mere concepts, those convictions which he had gained by an analysis of experience and supported everywhere else by experimental arguments,—an attempt which of course can never be neglected, but cannot for us be authoritative' (p. 194). With the exception of a few methodological essays and fragments, therefore, the whole of the seven volumes have been ransacked to supply an ample store of citations (always, by the way, rendered into German,[1] whatever be the original language) and to lay an adequate foundation for a sound exposition. Sometimes—and with reason—it is pointed out that Leibniz, to justify some position, uses an argument different from what really led him to its adoption. But upon the whole the method is to treat each section of the doctrine in close dependence on the evidence of the texts so as to make each contribute towards corroborating the conclu-

[1] Of course some renderings must be at best a *pis aller : e.g.*, *Vorstellung* for '*perception*'. The translation seems generally accurate, though naturally taking liberties in the omission of clauses. One mistake occurs, *e.g.*, p. 484, where instead of *die Stad eines Hofes* it should be *von einem Hofe aus* (la ville d'une cour).

sions that had on other grounds been elsewhere arrived at. But though it is well to call attention to the undesigned consilience of independent lines of inquiry, it is possible to go too far in ignoring the disturbing influence of the necessity apparently laid upon Leibniz to make his doctrine acceptable to all sorts and conditions of men and women, and particularly to show it as the faithful ally of orthodox religion, catholic theology, and established ethics. Zeller is hardly to be censured for describing the correspondence of Des Bosses (1706-16) as 'accommodation to a foreign standpoint'. Such accommodation, with its yearning for sympathy and intelligence, is only a too general weakness of Leibniz. But with Des Bosses he particularly indulges in a hypothetical acceptance of his correspondent's theories, with the scholastic perplexities of the *vinculum substantiale*, and confesses that the problem thus presented is new to him.[1]

The book is drawn up in two divisions. The first deals with the fundamental question of the Monad as the explanation of certain difficulties arising in the analysis of the mechanical concepts of body, extension, force, movement, space and time, and with the essential monadic quality or function of 'representation'. The second treats of the relations of the Monads to each other, to the universe, and to God,—with the theory of the pre-established harmony, of determinism and teleology, and with the principles of Leibnitian theology. But in the first part stands a long chapter (pp. 196-243) on the historical position of Leibniz, showing that the Monadology is inadequately treated when it is conceived as a mere movement of development and correction in the reigning Cartesianism, or as a mere reaction against the all-engrossing Pantheism of Spinoza. On the latter topic he protests against the exaggerated language of L. Stein, who, led away by the philologist's zeal for a new-discovered text, had over-stated both the attraction of Spinoza for Leibniz and his subsequent recoil. It is easy to show that the essentials (apart from the form) of the Leibnitian creed were fixed as early as 1671.[2] And it might have been helpful, on the other hand, to point out how much of the difference of Leibniz from Spinoza is due to the contrast between a regressive and a synthetic method: to call attention to their identity in ethical end, and to the way in which the conception of mind as *idea corporis* is translated by Leibniz into the representative units mirroring the universe through their respective bodies. Dillmann is clearly right in following Leibniz's own assertion that the underlying motive of the Monadology was to find a conciliation between the mechanical or corpuscular theory rampant in the new schools, and the teleology and idealism marking the Platonising philosophy of Christendom.

[1] Gerhardt, ii. 499. *Hoc argumentum de phænomenis ad realitatem evehendis, non nisi per occasionem tuarum literarum tractavi.*

[2] *Ibid.*, i. pp. 49-64; and iv. 221.

A genetic account of it therefore has to show how it grew up by a regress from the mathematical conception of the universe: *Videbam geometriam gradum struere ad philosophian de motu, et philosophian de motu ad scientiam de mente.* (Gerhardt, i. 68.)

Dillmann's earlier chapters accordingly show how Leibniz, by the conclusions which his persistent analysis of current conceptions of body, movement and resistance forced upon him, supposed himself obliged to postulate "monads" to save the reality which was not adequately recognised by these conceptions as they stood. That every special phenomenon in nature is explained and explainable in terms of mathematico-mechanics, and that no other understanding of material things is possible—is for him an undisputed fact (p. 195). Granting this, he argues, first, that body, movement and resistance themselves are, as we conceive them and deal with them, unreal and mere 'phenomena'—a phantasmagoria, consistent only in its relations and connexions. Unless on certain assumptions which the current theory ignores, a thorough-going analysis of body—its 'parts-out-of-parts,' as an aggregate of alleged atoms—pulverises it into non-entity. The atomist, obliged to admit the illusoriness in gross masses, thinks he has something real in his molecules and ultimate 'plena' or solids; Leibniz dispels his illogical conceit, and shows that his alleged limit to division is an arbitrary fiction. By *this* road there is no path to reality; and *ex nihilo* (in the parts) *fit nihil* (in the totals). For Leibniz, as Dillmann labours to point out (p. 64), body is *not* the phenomenon (= appearance) of a *tertium quid*, something behind or beneath it, and which is represented to the mind through it:—not the phenomenon of an unknowable *Ding-an-sich*. It is here that the ordinary interpreter of Leibniz goes astray, and speaks, *e.g.*, Zeller, of the monads as the 'ultimate ingredients' or 'original elements,' immaterial in their nature, which make up bodily things (p. 107)—as if the monads were a kind—an immaterial kind—of atoms. Really 'atoms' and 'monads' are wide as the poles asunder. The 'atom' is an utterly negative entity, indivisible, impenetrable, excluding from it all difference and variety: the 'monad' includes a world,—is essentially a *unity* of different elements, a synthesis of infinite complexity,—a true potency and sure promise of all reality.[1]

Body, to Leibniz, is not the incoming of an external,—and always external, something, a revelation of the unknowable *to* us: but 'body *itself* is represented in us': 'we ourselves are representations of bodies, and the idea of a body, therefore, is given in the same act with ourselves, with our very being, and has its origin in it alone: the idea not being evoked in us by external substances, but being our own spontaneous production'

[1] Teichmüller's criticisms of Leibniz are vitiated by this mistake between 'Monad' and 'Atom' (*Wirkliche und Scheinbare Welt.*, p. 138, &c.).

(p. 65). Casually heard, these words suggest perhaps Berkeley's reduction of matter to ideas: but with an important difference. For, in the first place, our world of thing and event is the production of our own monadic nature,—and not, in the first instance, a puppet-show due to the hands of the 'governing spirit'; and secondly, our 'monad' is but one amongst an infinite variety of others,—aspects, like ours; and, like ours, persistent in the infinite activity of God. Leibniz begins with *us*. We—each of us—have in our 'souls' the typical monad or unity: the '*Fester Halt*' which gives the details of the universe reality and coherence, permanent objectivity:—but which does more than merely unify, because it—under God—'expresses' in these details its own nature, and thus, in its measure and with its limitations, mirrors forth that universe which it 'involves' concentrated and *raccourci*. But what it 'represents' is not an outward object's intruding image,—to let in which it has neither *trous ni portes;* it does and can only 'evolve' or 'develop' the consequences in its own monadic (*quasi*-mental) force: and the perpetual miracle of divine operation is that this 'development' is at once in general harmony with all other developments in the universe, and at the same time 'feels' or 'perceives' them with greater or less inadequacy and indistinctness.

The attributes of the monad are, as Dillmann's earlier chapters seek to show, exactly such as are postulated to raise to substantial reality and (what a modern philosophy would call) concrete objectivity the merely phenomenal, abstract, and partial conception of body, motion and resistance. As against the discreteness of bodily parts—this mere *tas de pierres* which body is, and where each single stone again dissolves into nothing before our critical inspection—the characteristic of the true substance or reality is *unity:* hence the proper name (*Unité, Monas*) for the Leibnitian principle. Another point emerges if we note that 'extension' is an inadequate conception with its correlative suppressed: that, taken alone, it cannot constitute *un être accompli:* that there must be something, *of which* the diffusion or repetition constitute extension: and that motion, in like manner (p. 99), presupposes something permanent and substantial of which it is a 'mode' or 'accident'. Thus the 'monad' must have the further character of a 'force,' or 'power': an 'implanted principle of change and persistence'—something 'midway between the power and the action,' 'enveloping an effort, an act': 'involving' an effort, and that without external stimulus. To get a clear idea of this Leibnitian '*principle of force*, or *force primitive*'—to distinguish it as one and permanent from the *force mouvante*, or phenomenon of change in place and time, to unify the contradiction in its being at once a power and a tendency—a power which needs no help or solicitation *ut in actum transferatur*—is a chief difficulty in Leibniz. And the source of the difficulty is that force here, like substance in Spinoza, is really a higher category than its name

would indicate, and must therefore be taken *sensu eminentiori*, on a higher plane—something not imaginable, but intelligible, not physical, but metaphysical. In other words, we must equate 'force' with 'principle of unity,' and remember that 'unity' here is no mere logical link, but the *idée positive*, the power and reality of substance, an 'Entelechy': it is the force of a 'soul,' of an *Ego aut simile*, and is therefore *velut perceptio et appetitus*. 'Primitive forces,' says Leibniz, 'I consider to be identical with the internal tendencies (*tendentiæ*) of substances, whereby, according to a certain law of their nature, they pass from perception to perception and harmonise together.' The force then is not mechanical energy, but psychical 'perceptions and appetitions': the only real actions are 'representation of phenomena with transition to new phenomena'. Other function, save to perceive *in unity*, and to tend or involve effort *in unity*, there are none in the Monad. If therefore it be said, as Dillmann says (p. 304), that 'the concept of Representation is the most important concept in the Leibnitian Monadology,' we must remember that representation is not merely perception, but appetitive tendency. It includes the dynamic or progressive element, no less than the principle of statical order: is an innate spring of development, no less than a reflecting mirror of the universe.

Besides the active or positive force in the Monad, there is, thirdly, and corresponding to the physical phenomena of resistance and inertia, a principle of 'passive force,' or of negation. Such a force is not, Dillmann reminds us (p. 155), to be taken as reaction—which, after all, is a kind of action—but as a purely limiting or negative condition, equivalent to the restriction expressed by the law of the persistence of force. It expresses the law that in every monad which represents body the active principle is an *actif borné*. Here appears the dualistic instinct which perplexes the prosperous course of so many a philosophy. Every monad—except the monad of monads, *i.e.*, absolute unity and absolute force—has in it an element of 'first matter' or 'primitive passive power'. Every monad or soul, in plainer language, has a body which is 'affected' to it: a body which 'belongs' to it, without however being 'attached to its essence'.[1] Substance (*i.e.*, Monad) is always united to an organic body—'endued with an organic body by the instrumentality of which it perceives and desires'. 'Every veritable substance is composed of an immaterial soul and an organic body: and it is the compound of these two that we call *unum per se*.' Such at least is the law of the *physical* universe. So close, moreover, is the union of the

[1] This is the only excuse for Kuno Fischer's statement (Leibniz, p. 374) that 'Body and soul are the two forces which constitute the essence of each monad: the monad is an animate body'. Monad is never so used by Leibniz. Body is rather an 'invariable accident' than part of the essence of the monad.

two elements in this 'organism' that death cannot dissociate it: not merely the *anima*, but the *animal*, is imperishable—in the natural dispensation. Every body, wrote Leibniz as early as 1671, has a 'substantial kernel,' an 'inner body,' which as a perpetual *punctum saliens* survives unimpaired even in the ashes of the fire-consumed body, and carries on the soul of which it is the 'vehicle'.

Here lies a whole world of questions, interesting in themselves and cardinal to the philosophy of Leibniz; of which Dillmann's book supplies no connected treatment, but only touches on incidentally. How are we to reconcile the statement that 'finite substances never exist utterly separate from body' with such a passage as this: *Non opus est poni aliquid extra omnes monadas?* or again how there can be a harmony between soul and body if body is only a phenomenon, and a representation by and in soul? So far the answer is not far to seek. We are told, *e.g.*, that body is only 'the aggregation of the other substances constituting our *organs*,' or is 'all that in the mass or aggregate of substances takes place according to mechanical laws,' or, we may even say that the distinction between soul and body is a popular expression for the wide interval of dignity and power that separates the 'dominant monad' from the subordinate or organic monads belonging to it.

It would be vain within the limits of this article to consider in detail the questions into which these doctrines issue. There is first of all their bearing upon what we may term 'physical religion,' or on that materialistic theosophy and psychology which vends its drugs under the titles of 'spiritualism' or 'esoteric Buddhism'. But, for Leibniz, though in his dealings with transubstantiation he comes perilously near this abyss, these questions are of somewhat distant and problematic importance. There is more present-day importance in a second order of problem, relating to the theory of development, the persistence of the organism, and the relation of inner and outer forces in the play of evolution. Nor of physical evolution alone, but of intellectual and moral development in humanity. The questions of the limits of variation, the admissibility and transmissibility of acquired characters, are hardly so clearly formulated at present that they can be said to need no light from the theory of the pre-determined harmony and the law of continuity. Yet there is still a third region in which the Leibnitian ideas have not been fully set in their full importance, at least, by Dillman; and that is the theory which, in one of its aspects, recognises the function of 'little' or 'insensible' perceptions. The psychological theorem is of course only one aspect of a general biological law, and that again of a mathematical principle which connects with Leibniz's work in the regions of the integral and differential calculus. It must be remembered that the faculty-psychology of the eighteenth century, which Kant found and apparently sanctioned, has no place in the mental philosophy of Hobbes, Spinoza, or Leibniz.

A century before Herbart arose, they set aside and condemned the hypostatisation of mental forces under the influence of 'universal' names, which served only to obliterate from view the individualised and concrete operations. They differed indeed in the way they dealt with the organisation of these individualised 'little' ideas or volitions into unity; and probably they all occasionally lapsed into vulgar standpoints inconsistent with their general theory. But while they diverge in estimating the relation of the final unity to the multiplicity, they all hold with a true scientific grasp that the final or supreme unity is an empty 'form' if it has not been realised in constituent multiples, if it is not, as Bacon says, *determinata in materia*. This is especially illustrated in the case of will, as partly shown by Dillmann in his chapter on the 'Freedom of the Substances' (p. 41 *sqq.*). The Will, according to Leibniz, is no arbitrary sovereign whose fiat introduces decision amid a previous indifference; for in the teeming world of the Leibnitian monad there is no indifference, but everywhere determination in surcharged being to set free its scope of action. Nor on the other hand is the will the mere resultant in the struggle for life between the various appetites and inclinations of the different sub-monads, as Hobbes would *seem* to hold, the merely factual or chance victor in the battle of velleities. But in the will, as the act of the organic 'substance,' the 'dominant monad' represents in unity and conjoins in 'compossible' harmony the appetition of its subjacent organs: being thus in the perfect or ideal organism the 'absolute' unity or 'absolute' sovereignty,—*absolute*, because including, realising, and focusing the relative or partial elements, but not absolute if absolute mean arbitrary. When Leibniz asserts, as he does again and again, that the inclination, appetite, or motive of good, determines the will, *inclinando non necessitando*, Dillmann rightly rejects the interpretation of this, which would make him mean that the will is only stimulated and enticed, not actually constrained by motives. So long as 'there are no doors or windows in the monad,' this intrusion of compulsion is impossible. Monadic (and therefore spiritual) development is for Leibniz automatic, *i.e.*, autonomous, from within according to innate law, in its career absolutely certain and infallible for any one who can read in the germ-monad all the future with which it is pregnant, but not describable—except through abuse of a word which connotes logical impossibility—as necessitated. For Leibniz the necessary world is the world of abstract or eternal truths: whereas the realm of actual life and event is governed by the principle of determining reason,—the principle of the good, or the better, or the best.

With the same meaning is God described by Leibniz an absolute monarch. Equally with the *Deus* of Spinoza, it is His character, *Sich in Natur, Natur in sich zu hegen*. He also has no 'liberty of indifference'. But even in a higher sense than that in which the 'dominant monad' in the organism unites the rest,

does the 'monad of monads' represent in this unity and force (*i.e.*, as power, intelligence, and goodness) all the monads in their infinite variety, individuality, and spontaneity. For *in Him* they live and move: from Him they perpetually emanate,—'born so to say by the continual fulgurations of the divinity, from moment to moment'. Yet in Him they *act* and *live* and *move:* as Dillmann puts it (p. 465): 'to say that God creates the monads does not mean that God has manipulated things into existence, but that He *expresses* the very doing and realisation of the substances'. If by an abstract view He be at times described as the inventor and architect of the material universe, or as king and father of the intelligent 'substances',—if minds are said to be the citizens of the most perfect monarchy, we must remember that all these analogies are not to be taken *sensu strictiori:* but as expressions meant to emphasise the actuality of the divine life, as well as that potentiality which Spinoza, save inferentially in his identification of divine love with man's to God, regards as the only place assignable to the Absolute. Even if we do not accept Dillmann's view that 'the monadology is and remains in every respect at once a profounder and more important system than that of Spinoza (p. 475), his argument may serve to show they are not so opposed as Leibniz supposed or the world takes for granted.

W. WALLACE.

Beiträge zur experimentellen Psychologie. Von H. MÜNSTERBERG. Freiburg, i. B.: J. C. B. Mohr, 1892. Heft 4. Pp. 238.

The first three parts of these *Contributions* appeared in 1889-1890. In his preface to them, the author expressed the hope that some three parts would appear yearly, and stated that sufficient experimental matter to fill four had already been accumulated. In the present publication, which comprises ten short studies, are contained two or three of the researches there mentioned; the rest are either independent investigations or connected with previous work. One would be tempted to ascribe the delay in the appearance of Heft 4 to the rather damnatory criticism which its predecessors have undergone, were it not that, with two exceptions (of which more presently) Prof. Müller's review is left entirely unnoticed.

The first paper—*Studien zur Associationslehre*—is divided into five sections, each dealing with a special point in the psychology of association. (1) *Mediate Association.* In the course of experiments on the associative train of ideas, Dr. Scripture was led to the belief that "the members of an ideational series need not all be conscious" (*P. S.*, vii. 88). Wundt, who accepted the term "mediate association," and employed it to explain Herbart's *frei steigende Vorstellungen*, was careful to point out that the so-called "unconscious" ideas must always be "darkly conscious"; so

that there is nothing in the process to separate it off from the ordinary types of association (*P. S.*, vii. 360, 361). Prof. Münsterberg, who set out with the assumption of the correctness of Dr. Scripture's results, found them in no case confirmed. I have pointed out in MIND (1892, p. 227) that the interpretation of these results is not so certain as the writer assumed; and Dr. Münsterberg practically repeats this criticism (p. 7). As the matter stands, we have for association by unconscious members Dr. Scripture's very careful experiments; against it Wundt's *a priori* (!) objections, the possibility of another interpretation of the results, and Dr. Münsterberg's experiments (18 reagents, 7 of whom were chiefly employed: words and nonsense syllables, 600 experiments; and tones, 360; and taste, smell or colour stimuli, 560; Scripture's method, 300: practice?). (2) The author is concerned to show, in connexion with *Beiträge I.*, (*Willkürliche u. unwillkürliche Vorstellungsverbindung*), that "the external excitation does not arouse associations only when it is transformed into a conscious process, but there lies between external stimulation and conscious central process an unconscious stage, in which the play of augmentations and inhibitions, accelerations and retardations dependent on associative co-excitations, can be just as effective as in consciousness itself". The chronometrical proof was not accepted (MIND, 1891, p. 523; 1892, p. 397; *P. S.*, vi. 172 ff.; *Goett. gel. Anz.*, 1891, No. 11, p. 404). The new experimental method employed was the following: The observer sits before a curtained picture, at a suitable distance from it. A word is called, on which he must concentrate his attention. Two seconds later, the curtain is withdrawn; he has now to note if any part of the picture is seen before other parts, and to name this favoured part. Of 2000 experiments with two reagents, 617 were certain instances of such favouring of a special part, and this part was always associatively connected with the called word. If we admit the facts, without cavil, what does the statement mean, that "on the ground of associative moments a preference of certain objects of perception can precede the perception itself"? It surely only points to the working of associative expectation. That less than one-third of the experiments evinced this working is a proof that the method is not a very good one for its investigation. Expectation is inhibitive: we do not want the "*nicht bewusste Zwischenstufe*". (3) Under favourable circumstances of reproduction, the represented and the presented sensation can be shown to be psychologically (and therefore psychophysically) one and the same. A word is called; another word is shown, which the observer expects to be associatively connected with the first. This second word is read in the sense of the association, even when it differs considerably from the nearest associated visual complex (20-25 such unconnected words were shown per 100 experiments; 8-10 times the association would still be made). The letters, which the observer subjec-

tively added or altered, were reported as having been actually seen.[1] (4) *The "next-lying" association.* The constancy of associations has been emphasised. But the associative constellation is the unit, not the single idea.[2] Experiments show that, as was to be expected, the constancy found was due to the method of investigation used. But, on the constellation theory, also, there will be in certain cases "next-lying" association or associations; the "fringe" will be constant and constantly active, in these cases. The experiments on which the argument is based form part of an extended series, not yet fully worked over; the conditions of investigation are only given in outline. Scripture's general results were confirmed. (5) *Individual differences in the preference of forms of logical relation.* The reaction time of association points to the existence of great individual difference (Wundt, *Phys. Psych.*, ii. 316). The author uses the abovementioned material for a statistical classification of associative types (*cf. P. P.*, ii. 383, 384), and finds three main "intellectual temperaments," with intermediate forms.

The second research[3] is headed "Chain-reactions". These were suggested by Mr. Galton's anthropometrical experiments, in which a number of persons joined hands, and each imparted a pressure stimulus to his neighbour. A methodological interest is claimed for them: "psychometry" is to free psychophysics from the schematic and barren "psychophysic methods". Now, plainly, there are grave objections to the chain-method: objections which apply to all "mass-experiments". The method violates some of the most important conditions of psychological investigation: absence of distraction, &c.; while there are obvious sources of error in the technique. Dr. Münsterberg asserts that, in the simple chain-reaction, the latency-error of the electro-magnet is distributed over a large time, so that it practically disappears. What of the far larger variations determined by direction of the attention? Can they be con-

[1] Dr. Münsterberg's photographic shutter remained open for 0·02″. This makes his results the more striking, as the time of exposure employed by Prof. Cattell in his experiments on the range of apperception was only 0·01″ (*Phil. Stud.*, iii. p. 128).

[2] Such a theory as this of the "constellation" unit is, of course, not new. *Cf., e.g.*, Maas, *Versuch*, 1797, § 18.

[3] Here occurs the first reference to Müller's critique. Dr. Münsterberg controlled his reactions (mostly over 500σ) by a hammer whose control-maximum was 169σ. This was criticised apparently on the erroneous assumption that the new pattern of the Hipp Chronoscope was used. The author used the old pattern, and put it out of activity by short-circuiting. In his delight at making the point against Müller, he now remarks: "Anybody can see that it is perfectly indifferent whether *no* current passes through the instrument for 150σ or for even 1000σ". But on Wundt's method there is no question of absolute interruption. *Cf.* Kuelpe and Kirschmann in *P. S.*, viii. p. 150.

trolled, even if the whole time is very accurately measured?[1] He says, again, that stimulus and movement are closely correlated, and that variation is possible. I can see no difference between the chain and the single form here—unless it is to the advantage of the latter. Lastly, he urges that individual differences are eliminated, clinching this by a somewhat unfortunate appeal to Stumpf. It would rather seem, that as chronometrical investigations become more exact, these much emphasised differences tend to disappear.

Experiments are reported on the movements of one of two or three fingers or other parts of the body in response to touch-stimuli; on the time-relations of cutaneous fusions; on the discrimination-time of cold and hot, when the heat varied intensively; on the choice-time of passive movements, varied in direction; on that of eye-measurements; and on that of colour-quality. To these is appended an account of the "serial" reaction. In the chain-reaction the same mental process is repeated in different individuals; in the serial form, co-ordinate mental processes are repeated, with the same reagent. Such processes are those of multiplication, of discrimination of polygons by number of angles, and of naming colours. I will not attempt to discuss these experiments in detail. They are only intended to illustrate the method, and the method seems very exceptionable. I am entirely in agreement with Prof. Münsterberg as regards the possibility of extension of chronometry to qualitative investigation (p. 68); but the present form of extension will scarcely, I think, find acceptance.

In the third place come *Gedächtnisstudien.* (1) Two propositions are maintained: that the psychophysical disposition to a movement only reaches a moderate intensity (even when the movement is automatic and impulsive) if different movements in response to the same stimulus have not been voluntarily practised; and that psychophysic excitations are propagated solely along the line of momentarily least resistance. The author forgets that the "current notion" of the discharge of a ganglion-cell along all paths open, in inverse proportion to the resistance offered by those paths, presupposes a certain intensity of the excitation. His experiments are interesting as showing how lightly the automatism, which we so lightly put on, sits on us, in unessential cases.[2] (2) *The influence of the time-interval on our*

[1] Dr. Münsterberg insists, here as in former passages, that the important thing in chronometrical results is their mutual relation, not their absolute value. But relative accuracy implies absolute accuracy. In the finger Similarity series (p. 49) the pair I.-II. follows the pair III.-V. on the ground of 55σ. This relation may be incorrect, if the absolute error in amounts of 3500σ is 50σ.

[2] I have failed to grasp Dr. Münsterberg's point here. He writes: "It is not true, that every idea awakes in us a number (*Fülle*) of associa-

memory of sensations. Two departments were investigated: sensations of (arm) movement, and measurement by the eye. The latter experiments will be published separately, by Herr Lewy. The former were obtained with Dr. Delabarre's apparatus (MIND, 1892, p. 140); the method was that of mean error—which, I imagine, is not one of the "schematic psychophysical methods, whose barrenness becomes every day more obvious".[1] The results are massed, quite regardlessly of the fact that a straight arm-movement of 50 cm. is qualitatively something very different from one of 5 cm.; indeed, in face of the direct statement that, for a short reagent, the longer movements were uncomfortable. The general result—not to be regarded as universally valid; for experiments of this kind must be made with circular, not rectilineal movements—is that "from the first second the movement seems to decrease in memory, reaches its minimum after 10″, and then gradually increases, being, as a rule, greater after 60″ than after 2″". The normal magnitude (5 to 50 cm.) is overestimated throughout.

Fourthly is asked: How does the content of a time-interval affect our immediate estimation of its magnitude?[2] I have already criticised severely the Time-sense research of Heft 2, of which the present study is a continuation. That the latter cannot claim to rank higher than its predecessor has been convincingly shown by Dr. Meumann; I need not enter on a discussion of it (*cf. Phil. Stud.*, viii. 3, pp. 441 ff.).

The fifth paper is headed: *Einfluss der Nervina auf die psychischen Leistungen.* It is of the nature of a preliminary communication. Experiments were made with excitants, narcotics and antipyretics. I think that such preliminary statements should be avoided, on principle. There is a very great temptation to found general laws upon them. Prof. Münsterberg declares that he does not wish to do this; but at the same time he applies his results to supplement those of Kraepelin. The psychological discussion will be published later (p. 145).

tions, and that then the right association is intensified and fixed by accessory factors". But, if the constellation is the associative unit (p. 26), should not the presentation of a single sense-impression call up its constellation, and the further course of association be determined by such accessory factors?

[1] P. 42. *Cf.* the method of the sixth investigation, pp. 147 ff.

[2] Prof. Müller and myself pointed out that the sensations of strain, the varying intensities of which are in one place (Heft 2) declared to form the basis of our time-measurement, are elsewhere (Heft 3) stated not to vary in intensity at all. It seems that we confused psychophysics, psychology, and epistemology. The proof will be forthcoming later. "Ich beschränke mich hier darauf, den Vorwurf eines inneren Widerspruches unbedingt zurueckzuweisen" (p. 91).

Vergleichung von Tondistanzen. The victory in the Stumpf-Wundt controversy is awarded to Stumpf; but the work of Lorenz is allowed to possess a definite value. The author seeks to amplify it by two methods: firstly, by three-tone experiments; and, secondly, by experiments with two tone-pairs, the first of the second pair being the variable. But—and this is the significant thing—he gets Lorenz' results by the very means which Lorenz found to be valueless! In both series of experiments the variable is raised or lowered regularly, in one direction. Lorenz tried this plan, and pronounced against it (*P. S.*, vi. 44). Dr. Münsterberg says that Lorenz' method "wirkt störend und verwirrend," without particularising the test to which he put it.

The results are beautifully regular: but they are just worthless, pending a thorough examination of method. It is most incredible that the writer should have overlooked this fact. That the method of mean gradations requires great care in the using is sufficiently plain from Prof. Angell's results (*P. S.*, vii. 468), which are not referred to by him.

Under the title *Groessenschaetzung* are communicated the results of experiments, in which an optical distance was translated into terms of "touch," by the execution (with closed eyes) of an arm-movement which was for consciousness equal to it. The investigation has reference to those recently published by G. Martius (*P. S.*, v. 601) and von Kries (*Beitr. z. Ps. u. Phys. d. Sinnesorg.*, 173). It has two main conclusions: that in arm-measurement the estimation of magnitude is always the resultant of movement-sensation and distance-sensation; and that the direct estimation of the size of objects in the field of vision is not influenced by their distance from the eye. I imagine that the phrase *Entfernungsempfindung* is Prof. James' "depth-sensation". There is an *auch* in the formulation of the first result, which seems to contradict the second,—where there is no question of the distance-sensation. The deviation from the law found by Martius may be ascribed partly to the fewness of these experiments, partly to the fact that Dr. Münsterberg used on the average smaller experimental magnitudes and smaller distances than those of Martius, partly to the disparity of the sensations compared, and the consequent uncertainty of the criterion. In themselves, the movement-experiments are by no means unexceptionable; the motion was again rectilineal. It is not said how the arm was held at half- and quarter-distance; *i.e.*, whether the hand was sunk to elbow-height, or kept at the same level throughout, with downward or outward elbow-movement. No comparison of visual with tactual space is instituted.

Mitbewegungen. Opinions are divided as to whether innervation of the extremities is naturally bilaterally symmetrical, or asymmetrical. J. Müller, Fechner, Damsch, James are quoted

for symmetry; Preyer, Baldwin,[1] Stumpf, Soltmann for asymmetry. Experiments were made as follows: A thick test-tube was held in either hand, and figures drawn with the bases upon a board. Nine observers took part in the research. Each experiment was carried out at least five times by at least six persons. As several observers were needed to control every experiment (the test-tubes made no mark), it is plain that suggestion may have played some part in the results. The inference from these is, that there does not exist an innate symmetrical co-ordination of the muscles of the extremities. The explanation is teleological: concomitant movements become, when the attention is taken from them, of a kind to suppress superfluous bodily movement,—movement which would waste muscular work. The extreme symmetry-theorist will, however, hardly be convinced; the asymmetrical practice of arm-movements is life-long, and might account for the experimental facts. No reference is made in the paper to Kuelpe's work.

The section headed "Psychophysiologisches" suggests a new psychophysical method. The activity of brain-centres varies with the circulation. If we alter the relations of circulation, we may be able to localise centres; we can supplement physiological experiment and pathological observation. The time occupied in repeating a row of numbers, in naming the number immediately following those called, and in forming an association, was determined for one observer, and with six different head-positions. Nothing is said of practice, mean variation, &c.: the greatest association-difference found was 148σ, the greatest number-difference (the two sets of experiments are massed) 105σ. As they stand, the results prove nothing for or against the method, and the whole discussion only constitutes a claim to priority of idea.

Lastly comes yet another preliminary note on Pleasure and Pain. Experiments on arm-movement showed that, in pleasure, movements of flexion are made too small, those of extension too large; while, if one's conscious content be unpleasantly toned, the reverse obtains. A review of biological, physiological and psychophysical facts leads to the formulation that "the reflexly excited extensions and flexions are the condition of those conscious processes which we call pleasure and unpleasantness".[2]

[1] Prof. Baldwin's position seems hardly represented fairly. He expressly mentions a tendency to symmetrical movement, in the paper quoted. He has recently suggested the application to the problem of the Gotch-Horsley electrical method (*Am. Journ. of Psych.*, v. 276). Experiments by that method are limited to animals: but the argument from analogy would be a strong one.

[2] Meynert found a support for his theory of feeling in the reflex movements of seizure, accompanying pleasure, and of retreat, accompanying pain. This fact might have been mentioned; though it is only fair to say that Münsterberg quotes very few authors in the present communication.

The addition of this muscle-sensation content to externally-excited sensations tones these sensations, pleasantly or unpleasantly.[1] The identification of feeling with sensation is explicit: "That sensation which arises from reflex extension-movements is that which we call pleasure". There follows a general defence of the muscle-sense psychology, with some remarks on its epistemological and logical implications. This will be better criticised when the promised "systematic Psychology" (p. 91) appears. As regards the pleasure-pain theory, which is plainly of the same character as Prof. James' theory of the Emotions, it seems to me that it breaks down very nearly as soon as applied; one cannot carry it through, *e.g.*, for the sense-pains.[2]

This volume of the *Beiträge* presents a marked surface difference from its predecessors. Its tone is not so dogmatic; most of the studies are preliminary or partial communications; half-a-dozen times is reiterated the phrase that the consideration of "principielle Fragen" is purposely postponed. But I cannot find that the difference is at all fundamental. There is the same readiness to accept and turn to theoretical account results obtained from any subject who offers himself; the same defective exposition of experimental methods; practice is paid no explicit attention; the views of orthodox psychophysics are derided or adopted, as best fits the new theories proposed; hypotheses are erected on the slenderest basis. To the former errors of technique is added that of massing experiments in Stumpf's way. If it seems somewhat unfair to judge severely of preliminary work, it must be remembered that such work, unless carried out and described with especial exactitude, may be exceedingly misleading. The best instance of this fact in the present volume is the paper on the influence of temporal content on the estimation of intervals. And those who have investigated the problems of association know how numerous are the sources of error there. Unless the "vorlaeufige Mittheilung" allows the reader to fully understand the method employed, and incites him to repeat the experiments, it is worse than useless. In any case, its employment as a form of scientific publication is to be deprecated.

E. B. TITCHENER.

Einleitung in die Philosophie. Von F. PAULSEN. Berlin: W. Hertz, 1892. Pp. xiii., 440.

In this work Dr. Paulsen has given us a valuable and interesting account of the position held by modern philosophy; more

[1] In the *Willenshandlung* (p. 137) we read: "Selbstverständlich kann bei der Frage nach dem materiellen Substrat von einem mechanischen Korrelat des Gefuehlstones nicht die Rede sein". But *cf. Beiträge*, i. pp. 25, 26.

[2] I had arrived at this conclusion from psychological considerations. That the hypothesis is psychophysically inadequate is shown by Lehmann. *Cf.* his *Hauptgesetze*, *e.g.*, pp. 112 *seq.*

especially, perhaps, of that particular philosophical view which he accepts for himself. He has not—as he tells us—written a history of Philosophy; nevertheless his method of illustrating and leading up to the various questions which arise involves an extensive historical treatment, both of philosophers and their systems, and of natural man in his spiritual development. His own position is clearly defined in the preface; he regards an idealistic monism as the true interpretation of the universe, and his criticisms of divergent theories are employed to clear the way for an unambiguous statement of this view to which he believes all philosophical thought to be tending.

The manner in which the subject is handled is largely determined by the fact that the author considers philosophy to have a vocation, one which modern philosophers have made especially their own. It arises out of the quarrel between Religion and Science, and the philosophical solution of the problem is to make it possible for us to accept unreservedly a completely scientific explanation of Nature without losing sight of the religious aspect of the universe. This view of the function of philosophy is further elaborated in the discussion of the position to be assigned to it in our scheme of knowledge. It is not a thing which we can take or leave at will, the dullest of us must have his philosophy, his way of looking at things; and our choice is only as to whether we will have mere patchwork, or a work of art. But granted the inevitableness of philosophy the question still remains as to its rank amongst our other possessions; is it only an inevitable illusion, or may we rank it with our recognised, authoritative knowledge? Its position is defined in the first place by distinguishing it from mythology and religion; these are the outcome of poetic faith, and of the human will striving after an unconscious ideal, while Philosophy is a conscious product of the understanding. Religion, again, is the expression of the will of the community, but Philosophy is the work of the individual endeavouring to realise his position, and it is to the conflict between individual freedom and collective thought that the antipathy between them is largely due. Another reason for the distrust with which Religion regards Philosophy is the neutral position which it holds with regard to Science; it stands midway between the two, and while offering a hand to each fulfils its function best by holding them apart. Faith on the one side, Knowledge on the other; and it is by confining Knowledge within its due limits that full scope is in future to be given to Faith. Here we strike the keynote of the work; to define the bounds within which scientific explanation is applicable, to vindicate its claim to full recognition within those bounds, and then to show that there still remains a wide field within which our speculations must be guided upon other principles; this, we take it, is the task which the author has set before him. In other words, he accepts Kant's attitude towards the problem, while bringing the results of another century's work and thought for its solution.

The position of Philosophy among the sciences is perhaps a little difficult to grasp. One essential characteristic which distinguishes it from all other knowledge is its indifference to external aims (der Philosoph ist reiner Betrachter der Dinge, er treibt kein Gewerbe und sucht keinen Gewinn), but something of this capacity for clear-eyed scrutiny must surely fail when we set before us an object of such grave import as the reconciliation between Religion and Science? Further, while in a way beyond all sciences, it must still (as in the days of "natural Philosophy") maintain a close connexion with them if it is not to float away once more in the mists of pure *a priori* speculation; and it is as the summary or content of all scientific knowledge (der Inbegriff aller wissenschaftlichen Erkenntniss) that we are now asked to conceive of it. This view is at first sight depressing; is Philosophy really nothing more than an accumulation of scientific smatterings? Dr. Paulsen does not allow this, for he reminds us that the sciences are not a mere aggregate; like the universe which they reflect they form an organic whole, and it is in their essential unity that they present their true content, and afford the material for philosophical thought. To give the author's illustration: Philosophy is the central fire which illuminates and gives life to all the sciences, but it is a fire which is kindled only by the sciences themselves, and must expire without them.

Dr. Paulsen's philosophy is contained in his division of the subject. Given his idealistic solution of the ontological problem, then the fact that he regards the questions raised by theology and cosmology as identical prepares us for his pantheistic interpretation of the universe. It is in the first and metaphysical part of the work that the chief interest centres; the second, to which is relegated the theory of Knowledge, occupies a comparatively insignificant position; while the third is a mere outline for the substance of which the reader is referred to the "System der Ethik".

In the Ontology the leading notes are the refutation of Materialism and the triumph of Idealism. We are first shown how the natural Dualism, which originally presents no difficulties, becomes inacceptable to the philosophic spirit, and gives rise to the various attempts either to find a connecting link between mind and matter, or to express the one in terms of the other, and then the materialistic view, in its endeavour to explain consciousness out of the physical facts which it regards as the only true existent, is briefly but sufficiently expounded preparatory to its refutation.

It is characteristic both of Dr. Paulsen's practical turn of mind, and of the principle of æsthetic selection which he finds in Philosophy, that at this point he devotes considerable space to deprecating the popular view that materialism in its practical consequences is prejudicial to morality. According to him it is the man who makes his Philosophy, and not his Philosophy which

makes the man. In proportion as lofty ideals and noble aims are felt to be practical forces determining a man's mode of life, or mere fictions of no avail against his lower impulses, will he naturally tend towards an idealistic or materialistic interpretation of reality, so that the theoretical view which he adopts will be the expression rather than the guide of his life. We find the same thought of the importance of subjective "values" for Philosophy more fully developed in the chapter on Causality and Finality.

In his crusade against Materialism Dr. Paulsen declines to avail himself—at any rate in the first instance—of the weapons provided by the modern Theory of Knowledge. True, he recognises their efficacy, but, "Materialism took its rise in the region of Metaphysic or Natural Philosophy" and it is with a touch of chivalry that he decides to fight it on its own ground. He reduces its formulæ to two: (i.) Conscious processes are the *effects* of physical processes. (ii.) Conscious processes *are*, in themselves and objectively considered, nothing but physical processes in the brain. Of these he rejects the latter as meaningless; it is a position which no one can maintain when reduced to a definite statement. Thought is not movement, but thought; and to call it movement is merely a misuse of language which does not admit of argument. Against the former he sets up the counter-proposition that there is no causal relation between physical and psychical processes, and in support of it he appeals to the fundamental presuppositions of Science itself. The whole fabric of knowledge which is based upon our belief in the continuity of physical processes is shaken if we introduce the category of causality to explain the relation between physical and psychical facts. "From a scientific point of view the transformation of movement or force into thought would be equivalent to the annihilation of energy, and to find an origin of movement in a purely mental fact would be for physics a creation out of nothing."

All that we can say, therefore, of the relation between physical and psychical events is that they accompany each other, and that experience teaches us to expect that certain physical or physiological processes will be found side by side with certain mental processes. This is the doctrine of Parallelism. Its full significance for metaphysics, and more especially for the metaphysics before us, depends upon the extent to which its application can be stretched. Does the assumption of a complete Parallelism within the limits of conscious life involve its assumption beyond those limits? In other words, are we to assume, not only that every psychical fact has its physical counterpart, but also that every physical fact has its psychical counterpart? The issue at stake is a large one, and Dr. Paulsen accepts unreservedly "the hypothesis of Spinoza and Fechner, the hypothesis of a universal Parallelism". His ground for doing so is another hypothesis, *i.e.*, that the same laws of continuity hold good in the spiritual

world as in the world of matter, that we may apply the category of causality as rigidly, and in the same sense, to psychical as to physical facts. To take his example : I hear the clock strike, and on the grounds already referred to I am debarred from saying that it is the vibration of molecules which causes my sensation ; but that sensation must have a cause, hence we must look for it in psychical processes accompanying the vibrations.

The imagination finds more satisfaction than in this argument when it passes to the considerations drawn from a review of organic life and consciousness in their gradual development from the inorganic and unconscious. At no point except in self-consciousness is any immediate knowledge of mental life given to us, but no one stops short at that immediate knowledge and refuses to believe in the conscious life of his neighbour. In going so far he has, however, overstepped the only obvious boundary. Once grant a conscious life of which you are not conscious, and it will be difficult to show any good reason why it should not be indefinitely extended. The strictly defined limits which once existed for us between the animal and the vegetable kingdoms have disappeared, and even the distinction between the organic and the inorganic appears as one rather of form than of matter. Hence it follows that if we are to construct the inner world by analogy with the outer it becomes a mere arbitrary assumption to stop short at any point in the continuous series, and say that thus far these outward manifestations have their inward counterpart, but that below they have none. No portion of matter—we are told —however minute, is without its own peculiar nature, none but is actuated by the forces of attraction and repulsion; how can we construct these except as analogous to our own attractions and repulsions, as accompanied, that is, by feelings of pleasure and pain ? Moreover, where are we to find the reality of matter if, as reflexion teaches us, what we see is but its appearance ? Self-consciousness convinces us that the reality of phenomenon is the inner life, and unless we are prepared to deny all reality to so-called inanimate matter, we must concede to it an inner life analogous to our own.

Thus we are called upon to accept a thorough-going hylozoism as the bridge between Knowledge and Belief ; Knowledge of our own twofold life as body and soul, and Belief in the corresponding twofold life of the universe. The construction of the inner life in its lower stages of development is based upon the " voluntaristische " Psychology. According to it the original and constant factor of psychical life is the will ; intelligence, including all perception and ideation, is merely the instrument which the will fashions for its use in its higher stages of development. Blind impulse—Trieb—is the primitive form of will, constituting at first the whole content of the inner life, and to the end predominant over all other elements, holding absolute sway over our memories, our interests, our thoughts themselves. Schopenhauer, of course,

plays a large part at this stage of the exposition, and the Philosophy of the unconscious is an indispensable adjunct. The argument that psychical life must be explained by cause and effect, and that a chain of physical causation implies a similar chain within, is again urged as a psycholcgical ground for assuming unconscious mental processes—"potential perceptions"—to supply the missing links. But though Dr. Paulsen feels these to be indispensable he is inclined to compromise, and thinks that the difficulty may be met by the theory of sub-consciousness "das unbewusste ist nicht ein absolut Nichtbewusstes, sondern nur ein minder Bewusstes". It is this unconscious, or sub-conscious, inner life which forms the reality or inner life of the lower organisms and of inorganic matter, and just as the human frame surpasses as an organised system those of lower orders, so human self-consciousness surpasses "the disconnected and indifferent manifold" of the lower forms of psychical life.

This brings us to a discussion on the nature and constitution of the soul which aims at sweeping away "that remnant of an obsolete metaphysic," the soul as an ultimate reality, the subject of mental life. In psychical facts we have come to a knowledge of things-in-themselves, and must not look behind for any further reality. In answer to the objection that a feeling cannot be felt without some one to feel it, it is sufficient to say that a feeling never occurs in isolation, but only in the connected whole of a mental life, as a necessary member of which it has its place in reality. This we may allow, and yet not feel that we have received much help towards understanding how the "disconnected manifold" of the lower forms of psychical life can originally pass into the connected whole, the unity of self-consciousness, which after all has nothing at all analogous to it in the physical world.

From this idealistic ontology we are led to a Pantheistic theology by way of evolution and its significance for a teleological interpretation of the universe. Granted that none but purely physical explanations must be used in natural science, that metaphysical principles and supernatural agencies must be rigidly excluded from all accounts of the material world, it still remains for Philosophy to answer the question, "What is the *meaning* of all this?" That it *has* a meaning we find from the fact that all events are not of like importance for us; we cannot, for instance, regard each moment in the development of a living organism as of equal value, the process culminates in some stage or aspect of relative perfection which assumes for us the appearance of the aim or end determining its whole preceding evolution. That it is so we have indeed no proof; to any one who had no subjective preferences all events would be alike indifferent, and he would fail to comprehend those estimations by which we select from the actual what seems to us essential, and what therefore constitutes for us the real reality. Nevertheless the fact remains and must be taken into account as the basis of all philosophical

inquiry. But in asserting this "æsthetic teleology" Dr. Paulsen does not allow the validity of the "argument from design" as used by natural theology. There is no more room for final causes in nature than there is for physical causes in our interpretation of nature; they do not stand in a position of rivalry, they supplement each other. Every process can and must have both its physical explanation and its teleological interpretation, corresponding to the twofold aspect of reality.

Utilising this principle with reference to the modern theory of evolution Dr. Paulsen finds that "natural selection" is not in itself a sufficient explanation of evolutionary phenomena. It is true that we can no longer assume either the original creation of distinctly developed species, nor yet a pre-established order of things designed to develop to the greatest possible perfection the existing forms of organic life. Still some positive principle is needed to supplement the negative description of a merely mechanical selection, and this we may find in the conception of a will which, in its efforts towards life and the maintenance of the species, is the ultimate presupposition of all evolution. Physically such a will is no more than a system of forces which reacts upon certain stimuli in a manner predetermined by its constitution. But metaphysically we may regard the whole process of evolution as a blind striving of wills after an unconscious ideal, and every organism as the embodied expression of will in its attempt to realise the type of its species. One advantage of this theory of an "immanent tendency" is that it enables us to conceive of a better mode of achieving the transition into higher and more perfect forms of life than by way of the external aid of a struggle for existence.

It is in this way that we are asked to regard organic life as subservient to an end; not as if it were "pieced together by some external thinking Being," but as the outward expression of an inner life developing itself with teleological necessity. The striving after an end is as characteristic of psychical life, as mechanical causality is of physical; and the next step towards Pantheism is the universal application of this idea. All movement has for its counterpart a will striving after an end, for the most part, it is true, unconscious, but none the less real. The further construction of an ultimate consciousness embracing all these lower wills in one final unity, therefore of nature as a system developing towards one ultimate end, is suggested rather than asserted. We have passed beyond the region of proof, "we can calculate the movements of the planets, but we fail to grasp the music of the spheres"; and in the chapter on Pantheism and the Universal Soul Dr. Paulsen confines himself to bringing together some considerations which may, or may not, lessen the difficulties which press upon us when we try to give definite form to the thoughts arising from his very suggestive discussions. Perhaps more help may be derived from the chapter on the Relation between Know-

ledge and Faith, in which the importance of the latter is powerfully urged. Knowledge is of the past only, and has little practical influence; to Faith the future lies open, and the motive power in life is the more or less conscious ideal which every one possesses, which determines for him the meaning of the universe, and towards which he strives either blindly or with open eyes.

There is little in the Theory of Knowledge which has not already been touched upon in the Metaphysics. Dr. Paulsen seems here to occupy a position of eclecticism. So far as concerns the inner world of consciousness he is a realist; here we know "things-in-themselves"; there is no distinction between the self as we know it, and the self as it really is, for the soul *is* nothing more than the sum-total of the phenomena of consciousness. His external world he constructs with Mill from "permanent possibilities of sensation," but with Kant he holds that in objects we know only phenomena which point to an underlying reality. Against Kant, however, he urges that we do know something of that reality, for we can construct it in analogy with the reality which we know in ourselves—the inner life. On the problem of the origin of Knowledge Dr. Paulsen adheres to the empirical standpoint, and denies the possibility of universal and necessary judgments concerning matter of fact. He raises once more, and discusses at length, the question: "Has Kant answered Hume?" and he answers it in the negative—mainly on the psychological grounds that inasmuch as the nature of the knowing subject changes historically, it is impossible to find in it any rule as to the forms which the object will assume in Knowledge. On the other hand he preserves, as "the cardinal point of the Kantian Philosophy," the thought that though knowledge is a function of the subject it is not the only function, nor even the most important.

It is impossible in a short account to do justice to the persuasive eloquence of the work, or to the innumerable interesting suggestions which occur in it. It is a book which will probably be widely read, and cannot fail to stimulate thought and interest in its subject wherever it is read.

H. Dendy.

VII.—NEW BOOKS.

The Elements of Logic, Theoretical and Practical. By J. H. Hyslop, Ph.D., Instructor in Logic, Psychology, and Ethics, Columbia College. New York: Charles Scribner & Sons, 1892. Pp. vii., 403.

The author states in his Preface that his aim has been "to produce a work that could be used both for beginners and for advanced students of the subject, but not for those who care to go into it exhaustively". This double aim indicates very clearly the character of the book. It is not only in many respects a clear exposition of the elements of the subject, but it is, besides, a thoughtful and to some extent an original contribution to Logical doctrine. But the author does not exaggerate his differences of view: on the contrary, he makes very fair and candid acknowledgments of the work of the best-known writers in English. The most elaborately worked-out chapter is that on Inductive Reasoning, in which the author's remarks are worthy of some consideration. His treatment of Fallacies is again specially good. The author introduces the very useful term *Conferentia* (in antithesis to *Differentia*) to denote the essence of the Genus.

But his treatment of the whole subject of the relations of Intension and Extension—though very painstaking and elaborate—is far from being clear, intelligible, or consistent. He aims at a distinction between the Mathematical and the Logical General which appears (on p. 193 and elsewhere) to correspond merely to the distinction between the Extension and the Intension of the Genus-name, though (on pp. 75 and following) he seems to apply the terms to different sorts of genera. There is also great wavering in the use of the terms *Essentia* and *Accidentia*. On p. 113 he maintains that the distinction is extra-logical, and yet he bases his discussion of Fallacies of Equivocation in Quality and his contrast between the concrete and the abstract interpretation of propositions (p. 237) mainly on this distinction. On p. 80 he commits an extraordinary blunder. After quoting Mill as follows: "Whiteness, Length, Virtue signify an attribute only (and are therefore) non-connotative. But White, Long, Virtuous are connotative," the author makes an attack upon Mill for holding that adjectives are non-connotative and abstract names connotative! The author's treatment of Disjunctives involves a gross violation of formal Logic. On p. 109 he says: "The proposition A is either B or C *means* that if A is B it is not C, or if A is C it is not B"; and yet, on p. 215, with minor A is not B, he infers that A is C, thereby committing the fallacy of denying the antecedent or affirming the consequent. There are several other formal mistakes in the work, and an unusually large number of loosely-composed sentences and misprints.

Evolution and Man's Place in Nature. By Henry Calderwood, LL.D., F.R.S.E., Professor of Moral Philosophy, University of Edinburgh. London: Macmillan & Co., 1893. Pp. vii., 349.

Professor Calderwood maintains two theses. (1) That the origin of animal intelligence is incapable of explanation as a product of the evolution of organic life under the law of natural selection; (2) that human reason cannot possibly be a development of merely animal intelligence.

His point of departure is the distinction between "sensory and rational discrimination". Sensory discrimination consists in merely experiencing different sensations, rational discrimination in interpreting sensory differences so as to distinguish by their means different objects. Objective reference is the essential characteristic of intelligence as contrasted with mere sensibility. The development of sensory discrimination depends on biological development. But "intelligence has not been scientifically traced to structure, as sensibility has been, as co-ordination of impressions has been, as excitation of motor action has been". Biology cannot show why in the higher animals and in man passive modifications of sentience become invested with objective significance for the subject which experiences them. "Looking at a dog's brain, we can tell that the animal has been capable of sensory experience, and of locomotion; and has been distinguished by prominence of the sense of smell. But, with the evidence lying before us in this structure, we cannot tell that the animal was intelligent."

Professor Calderwood confidently denies that "animals lowest in the scale" possess anything higher than powers of sensibility. "When the higher mammals are compared with the lower it is clear that a power of Intelligence must be attributed to the higher, which cannot be credited to the lower." The most satisfactory evidence of this is found in the behaviour of animals under domestication, and especially in their ability to attach some meaning to conventional signs. "The animal capable of this, transcends the sphere of sensible discrimination, showing itself able to interpret sensory experience, and to apply such interpretation for its own guidance." But the best achievements of animals show no trace of the distinctive characteristics of the "rational life" of man. "The outstanding features of this rational life spring out of the power to reason from general principles towards a systematised view of existence." This implies self-consciousness—the distinction between self and the world. 'Rational power' is concerned with the relations of experience to a "sphere of knowledge". The contrast between the sporadic acts of intelligence in animals and the systematic unity of human experience is strenuously urged by Professor Calderwood.

Perhaps the weakest point of the book is the tacit assumption that inasmuch as neural processes are homogeneous, the mental states correlated with them must be homogeneous also. On this view the qualitative differences of sensation ought to be impossible; for their neural counterparts are all modes of motion. It may also be doubted whether Professor Calderwood is justified in his confident denial that the lower organisms possess intelligence in the sense of reference to an object. Is it certain that the amœba is incapable of saying to itself "thingumbob again"? Finally, scant justice is done to the old doctrine, which Romanes has recently brought forward under a new title. Professor Calderwood seems quite to miss the significance of the theory of "recepts".[1]

Kant's Kritik of Judgment. Translated, with Introduction and Notes, by J. H. BERNARD, D.D., Fellow of Trinity College, and Archbishop King's Lecturer in Divinity in the University of Dublin. London and New York: Macmillan & Co., 1892. Pp. xlviii., 429.

This translation supplies a want which must have been keenly felt by every lecturer on the Kantian Philosophy. The *Kritik of Judgment* forms an integral and essential part of Kant's system, and it exercised a

[1] A theory which can be traced back at least as far as Gassendi.

powerful influence on the subsequent development of philosophical speculation in Germany. Yet no previous English translation has appeared. Mr. Bernard has done his work well. His rendering of technical terms is throughout careful and consistent. His version, so far as we have been able to test it, appears to be accurate, and it is as readable as an accurate version could reasonably be expected to be.

In his introduction he gives a lucid sketch of the plan and contents of the *Kritik*, and criticises in an interesting way the Kantian doctrine, that the conception of design in nature is merely regulative. His contention is that arguments precisely similar to the Kantian might be urged against "our affirmation of purpose, design, will, as the spring of the action of other human beings". He might have adduced, in support of this view, Berkeley's *Alciphron*, and that very able work, Herbart's *Modern Realism*.

Plato and Platonism. A series of lectures by WALTER PATER. London and New York: Macmillan & Co., 1893. Pp. 258.

We are told by Mr. Pater in an introductory note that "the lectures of which this volume is composed were written for delivery to some young students of philosophy, and are now printed with the hope of interesting a larger number of them". If the young student is capable of becoming interested in Plato at all, he is certain to be powerfully attracted by this book. It is delightful reading throughout. The formal account of Plato's teaching occupies comparatively little space, being confined to three chapters out of ten: chap. vii., "The Doctrine of Plato," chap. ix., "The Republic," and chap. x., "Plato's Æsthetics". Mr. Pater holds with the Master of Balliol, that Platonism is "not a formal theory or body of theories but a tendency, a group of tendencies—a tendency to think or feel, and to speak, about certain things in a peculiar way, discernible in Plato's dialogues as reflecting the peculiarities, the marked peculiarities of himself and his own mental complexion". The "conditions antecedent and contemporary" which helped to mould the mind of Plato are treated in the first five chapters, which are concerned with the pre-Socratic philosophers, with Socrates and with the Sophists, and ch. viii. on "Lacedæmon," which is preliminary to the exposition of "The Republic," as a "theoretic attempt made by Plato to arrest the process of disintegration in the life of Athens, by forcing it back upon a simpler and more strictly Hellenic type". Ch. vi., on "The Genius of Plato," gives a vivid picture of the personality which was "resistant to," while it was "moulded by," these contemporary and antecedent conditions. Mr. Pater here sets forth in his most impressive manner the "paradox" of Plato's mental constitution, the combination of sensuous richness and vividness with austere devotion to abstract truth and to moral ideals. In his case, "the sensuous lover becomes a lover of the invisible, . . . carrying into the world of intellectual vision all the associations of the world of sight. Some of the invisible realities he can all but see with the bodily eye." The account of pre-Socratic thinkers is scarcely up to date. It fails to point out that Heracleitus, Parmenides, and the Pythagoreans had by no means passed beyond the materialistic point of view. This is unfortunate, because it obscures a distinctive merit of Plato—his origination of the concept of immaterial existence.

A Review of the Systems of Ethics founded on the Theory of Evolution. By C. M. WILLIAMS. London: Macmillan & Co., 1893. Pp. 581.

Mr. Williams devotes 264 pages of his work, constituting its first part, to the recapitulation of the theories propounded by the chief exponents

of Evolutional Ethics, including such authorities as Darwin, Wallace, Haeckel, Spencer, Rolph, Leslie Stephens, Höffding, &c. In the second part, he proceeds to give a positive exposition and justification of the principle of Evolution as a basis of Ethical theory. Evolutionists only recognise two springs of action in sentient beings—the preservation of self and the preservation of offspring. Out of which of these two impulses is Altruism to be evolved? This is the central problem of Evolutional Ethics, and the one with which Mr. Williams closely deals in this part of his work. After three preliminary chapters treating respectively—i. The Concepts of Evolution; ii. Intelligence and "End"; iii. The Will; in ch. iv. the Mutual Relations of Thought, Feeling, and Will in Evolution are considered. In this connexion Mr. Williams criticises Dr. Sidgwick's position with regard to the possibility of separating desire from feeling. Mr. Williams thinks there can be no desire unconnected with pleasure or pain to the agent desiring. This is a time-honoured controversy, and we do not think Mr. Williams has been very successful in his contribution to it.

In ch. v. Mr. Williams investigates the existence of Altruism in types of animals lower than man. He has succeeded in bringing together a variety of instances showing the presence in them of at least a germinal altruistic instinct. In no case, however, does this grade of Altruism extend beyond the regard for offspring, and this impulse is so automatic in its operation that many animals if deprived of their own young must satisfy their fostering tendency by nourishing offspring other than their own. Between this irrational automatic impulse, however, and the abstract philanthropy of human beings there seems a great gulf which the Evolutionists have a difficulty in bridging over. Ch. vi. is devoted to an account of the attempts which have been made to evolve Altruism from the original impulses of organic life. Mr. Williams thus sums up the results: "Altruism is increased directly by the perception and choice of co-operation as advantageous, by the spread of altruistic feeling and the compulsion of the social environment, as well as by the higher means of persuasion and affection, in which Altruism itself effects the increase of Altruism; and it is also increased indirectly by the aid of natural selections between individuals, families, neighbourhoods, and groups of all sorts, co-operation becoming more and more advantageous with the *increased density* of *population*" (p. 428). Ch. vii. is an historical retrospect of the moral progress of mankind; it is full of important materials and will be probably to many readers the most interesting and instructive chapter in the book. Ch. viii. contains criticisms of Mr. S. Alexander's Absolute Right; of Rolph on Want as necessary to induce action; of Spencer on Altruism, &c., &c. Other topics discussed in this chapter are: The Doctrine of the Atonement; Biblical Authority for the Killing of Witches and Heretics; The Asceticism of Christianity; The Defence of Christianity as being a comforting belief. The book concludes with a chapter on the Ideal, and the way of its attainment. The author challenges the opinion of Mr. Stephens, that it is impossible for us to determine what a state of ideal morality should be. Mr. Williams on the contrary contends that there would be little disagreement in opinion as to what the ideal should be, but that our chief difficulty must lie in the determination of the course to be pursued in order to attain to the ideal. We can recommend this work as much to the general reader as to the student of contemporary philosophical systems. It is full of illustrative matter and popular presentments of speculative questions, which must at some time or other have suggested themselves to every mind.

La Philosophie de Hobbes. Par GEORGES LYON, Maître de Conférences à l'École normale superieure. Paris: F. Alcan, 1893. Pp. 220.

This is the most complete and detailed exposition of the Philosophy of Hobbes which is anywhere to be found. The excellent monograph by the late Professor G. C. Robertson is largely concerned with his personal and literary history, so that in it the systematic account of his doctrine is confined to no more than 90 pp. M. Lyon, after sketching the life and work of Hobbes in ch. i. and after giving an interesting account of his controversy with Descartes in ch. ii., proceeds in the eight following chapters to reproduce for us the train of deductive reasoning by which Hobbes passes from doctrine of method and explication of ultimate concepts, through Psychology, to ethical and political theory. The work is extremely well done, and it has evidently been a labour of love. Stress is everywhere laid on the fusion in Hobbes of two tendencies, which are commonly opposed to each other—the tendency to *a priori* deduction from definitions after the type of mathematical procedure, and the tendency to trace all knowledge, not only as regards its genesis, but also as regards its validity, to the perception of individual and singular things. The result is the "erection of an original and equivocal system, which, according as we consider it under this or that angle, appears as a monument raised in honour of (speculative) reason or as a trophy in glorification of experience". Hence the admiration which it has excited in thinkers of opposite schools.

The account of the nominalism of Hobbes is in our opinion not quite satisfactory, inasmuch as it fails to bring out the abiding value of Hobbes' theory of the connexion of thought and language. The vital point of this theory is that, apart from language, abstract ideas are merely shifting and evanescent points of view in which the individual mind considers things at this or that moment. Only in so far as these modes of considering things take the form of determinate meanings attached to determinate words, do they acquire the fixity and permanence which renders them capable of figuring as elements in a logical calculus. Doubtless he has pushed this view too far and has connected with it a theory of the nature of real existence which cannot now be maintained. But the central point of his doctrine remains a definite and irreversible step in the progress of Psychology.

M. Lyon's book ought to be read by all who take an interest in the Philosopher of Malmesbury. It is a model of lucid exposition: it is throughout careful and accurate; it abounds in fine observations, and it covers ground not occupied with nearly the same fulness by any other work on the subject.

Les Éléments du Beau, Analyse et Synthèse des Faits esthétiques, d'après les documents du Langage. Par MAURICE GRIVEAU. Paris: F. Alcan, 1892. Pp. 582.

M. Griveau attacks the æsthetic problem by a new method. His point of departure is language. The idea of the beautiful—and of the ugly—finds expression in a rich vocabulary of epithets, eulogistic or critical. The author regards these epithets as expressing "elements of the beautiful". He sifts, analyses and classifies them, and by this process works out a system of æsthetics which presents many points of interest. Longer notice will follow.

Platon, sa Philosophie, précédée d'un Aperçû de sa vie et de ses écrits. Par C. BÉNARD, Ancien Professeur de Philosophie. Paris: F. Alcan, 1892. Pp. 546.

There have always been two opposite opinions among the historians of philosophy as to the true character of Plato's literary contributions to the intellectual development of the human race. On the one hand it is maintained that Plato was a great constructive thinker, systematising and organising the teaching of his predecessors, especially with the view of establishing the doctrines of Idealism inculcated by Parmenides and the Eleatics. On the other hand there are many analysts of the progress of Greek thought who have found in Plato's writings nothing but a loose collection of hazardous speculations, by which the impression is produced that Plato, while meditating very much, had believed very little. M. Bénard tells us that the aim of his work is to vindicate the claim of Plato to be a positive and dogmatic expounder of truth. His arguments are principally derived from the writings of Plato himself. M. Bénard does not pretend to have derived much illumination from the mass of German and English commentators extant, and he only mentions one of his own countrymen, M. Alf. Fouillée. M. Bénard deprecates indeed the criticism of the learned by confessing that he aims rather at popularity than profundity.

It is always an interesting question with students of Plato's dialogues how far the opinions he sets forth therein are his own or those of his principal interlocutor, Socrates. On this point M. Bénard remarks that Plato was not so much concerned to present the doctrines of his master Socrates in their rudimentary and germinal stage, but rather as they appeared in their maturity, under which aspect Plato wished posterity to regard them (p. 5). It does not seem, however, that Platonism can be legitimately regarded as a mere evolute from Socraticism. In many respects Plato makes a completely new departure in Matter and Method from his master, to the extent even of complete opposition; for example, while the constant boast of Socrates was that he had brought philosophy from heaven to earth, the lofty Idealism of Plato seemed rather designed to exalt philosophy to heaven.

M. Bénard thus summarises the epistemology of Plato. The lowest round in the ladder of human knowledge is *sensation*, αἴσθησις, the process by which external objects are primarily apprehended in a kind of rough or plastic state. The next step is *opinion*, the act of judgment by which the mind cognises without reflecting or reasoning, a simple affirmation or negation which may contain truth or falsehood, according to the degree of mother-wit or divine inspiration possessed by the agent. A still higher step in cognition is *reasoned opinion*, that is, a judgment or opinion based upon evidence, a product of the *discursive* faculty. Finally we arrive at science, the realm of ideas, the most general truths of which Mathematics, Astronomy, and Music partake.

To the three degrees of science Plato found a corresponding gradation in the realm of objectivity. (1) The sensible, phenomenal, or unreal universe; (2) An intermediate state of existence between being and not being; (3) The intelligible or real world, the essence of things, ideas, the ultimate potentials of all things. It is this parallelism between knowing and being that enables the human intellect to decipher the true characters of things.

After presenting a general outline of the Platonic teaching, M. Bénard enters upon a full delineation of the details of Plato's system as they flow from the principles of idealism, treating his subject in accordance with

the three established divisions of philosophy, Dialectic, Physic, and Ethic. In the Dialectic (p. 191), M. Bénard discusses Plato's peculiar treatment of the relation between the active and the speculative faculties of the human soul. The intellect of man is inspired and stimulated by an impulse continually tending to the attainment of the ideal or perfect. This passion for excellence is the enthusiasm which elevates and dignifies every species of human art. Ideals are an irresistibly attractive force, compelling the highest order of souls not only to contemplation but to union and assimilation with themselves.

M. Bénard's account of the Platonic physics includes under this head Cosmology, Anthropology, Psychology, and Theology. He thinks the entire method of the Platonic Psychology is summed up in the maxim—Know thyself. The most distinctive characteristics of the soul are its *mobility, activity, spontaneity;* by these attributes the spiritual and immaterial soul manifests itself as the organ of choice and free-will, obeying only the guidance of the ideal.

M. Bénard has done well in devoting a considerable portion of his work to the examination and elucidation of the chief topics comprehended under Ethic, *viz.:* the sciences of Morals, Politics, and Education.

Education includes Æsthetic and Rhetoric. Plato's views on education are most clearly enunciated in the Protagoras, Hippias, Republic, and Laws. The gymnastic of the body and the mind is the means of promoting virtue, which Plato identifies as the health of the soul. Health again is the just balance and equilibrium of functions in the individual and in the state. The whole life of man needs rhythm and harmony; hence the special importance for all artistic exercise, such as Music and Rhetoric. M. Bénard thinks too much prominence is given to Plato's censure of the poets in the Republic, as it is clearly only dramatic poetry to which he objects, as being designed to stimulate and irritate the passions of men, which education should seek to calm and purify (p. 478). He concludes with an attempt to form a due estimate of Plato's position in the history of the development of the human intellect; he also treats of his general method, and the relation of his system as a whole to that of Aristotle.

Die Sittliche Weltordnung. Eine Systematische Untersuchung. Von Friedrich Traub, Stadtpfarrer. Freiburg: J. C. B. Mohr, 1892. Pp. 96.

This essay (not counting a brief introduction and conclusion) is divided into four sections as follows: 1. The Order of Nature; 2. Morality; 3. The Idea of a Moral Order of the World (that order of things which is governed by the idea of the Highest Good—*i.e.*, the exact apportionment of happiness to virtue—and guarantees the realisation of this idea); 4. The reality of a Moral Order of the World.

1. Is to a great extent a *résumé* of the Kantian doctrine as understood by the author.

As regards the idea of Morality, the author's view is that we have no such firm basis to start from as is provided by actual experience in the case of physical knowledge. For experience may be unable to show us a single action which completely realises the moral idea. "Nature expresses a fact which is confirmed by empirical knowledge; morality is the expression of a law which is exalted above empirical facts." "Ethics, the science of Morality, seeks an answer to the question, What ought I to do?"

There is no doubt a most important distinction between what *is* and what *ought to be;* but it seems to be hardly a satisfactory explanation of the difference to say (as Mr. Traub does) that Will (the subject-matter of

Ethics), so far as it *is* the subject-matter of Ethics, is not an object of psychological investigation—that, ethically regarded, human actions are not causally conditioned. This same Will, from the standpoint of Empirical Psychology, *is*, in his view, causally conditioned. The empirical and ethical views of Will are thus diametrically opposed, not to say absolutely incompatible. How any creature can have a Will which both is, and is not causally conditioned, remains a mystery.

All Morality, Mr. Traub insists, presupposes recognition of the idea of *Good* as distinct from *Pleasant*, &c. This idea of good requires a relation of the Will to an unconditioned law. In as far as the demands of this law are fulfilled the Will is free. *Free* here should mean uncoerced by the Natural Order—for obedience to law, even unconditioned law, is not itself unconditioned or free. And such obedience, in mortal men, must be realised in mere empirical action ; and, if so, it must be of the same tissue, warp and woof, as the ideas and feeling which are empirically psychological. Indeed the very recognition of this unconditioned law (which carries within itself the reason for its own acceptance) is but an item, however important, in the series of thoughts which help to constitute the subject-matter of that Empirical Psychology which is described as "Naturlehre Zweiter Ordnung". Mr. Traub (who is a Psychological Hedonist) asserts that no action is done except as it is pleasurable or useful. But the Moral Law must, if realised, be realised in action ; and must thus, it would seem, be strictly conditioned by mere natural feeling and the Category of Causation.

There remain two real difficulties to be met, and it seems to be these which the author chiefly has in mind when he insists on the necessity of basing Ethics partly on Revelation—on bringing Revealed Religion to the aid of Ethics. These are (1) the existence of Evil ; (2) the difficulty of showing that Virtue will be rewarded. The Highest Good is the "vollkommene Verknüpfung der Tugend mit der Glückseligkeit". This bliss, however, concerns only the *ethical* personality (*Subjekt*), and is nothing but the reflex in feeling of successful moral action. The Highest Good must indeed also include freedom from all ills, but this is only a negative characteristic.

Mr. Traub does not consider that the difficulties above indicated are removed by accepting the existence of God and of a future life. He holds that nothing short of belief in the Christian religion is sufficient because Christianity is the only morally perfect religion, and nothing short of a perfectly moral religion can confirm a perfect morality.

Ueber die Lehre vom genetischen Fortschritte der Menschheit. Rektorats-Rede von Dr. HERMANN SIEBECK. Giessen: Curt von Münchow, 1892. Pp. 18.

In explaining the subject of his address more fully than is done in the title, Dr. Siebeck says it is concerned with the view that "mankind inevitably follows an upward path in the course and process of culture, in spite of any apparent stoppages and retrogressions—meaning by *upward path* that there will be secured a continuous increase of happiness for the individual and for the whole of which he is an unit, and at the same time an increase in the ideal worth of the physical and intellectual work accomplished by both". This widespread doctrine claims, he says, to give a profound, and at the same time, ultimate answer to the question, What is the real meaning and end of the life of man? But in spite of the air of axiomatic venerableness which seems to cling about it, this theory of progressive development is in fact one of the very latest intellectual acquirements of civilised man—indeed, a noteworthy

mark of distinction between modern times and previous ages is to be found in the fact that for the latter no similar historico-philosophical problem existed. It is a doctrine to the inception and evolution of which many and complex factors have contributed.

As a result we find the modern view, already formulated, that Man in virtue of the tendencies of his nature is bound to develop to higher degrees of perfection and happiness in the course of time—that the very essence of culture is a continuous progress, in the course of which the antagonism between man and his environment is by degrees done away —that environment becoming ever more inwoven with Man's very life. In close connexion with this is the further view that Man's significance, as an unit, is ever lessening in comparison with his significance as a constituent of the mighty whole. And all is seen and estimated from the point of view of progress, understood as a manifestation of harmonious forces. In the world of matter, of thought, and of conduct, what is earlier and lower is considered to find its outcome, explanation, and justification in what is later and nobler. In this idea of a self-conditioning, self-perfecting, unceasing development of the world as the stage and the material of an ever wider and deeper human life, the content and purpose of the universe are seen to coincide. The final stage of this development may be regarded as receding into a dim and infinite distance, or as being a definitive result, which, when reached, contains within itself the conditions of its own permanence.

This doctrine of progress is, in Prof. Siebeck's view, rather of Faith than of Knowledge. People believe in an unending progress of the world and of mankind, because otherwise they would not be able to see that what *is* is what *ought to be*—that Life is really worth having.

Against the doctrine various objections have been raised—according to the pessimistic (but itself evolutionary) philosophy of Schopenhauer and Hartmann, it is an unjustifiable generalisation, and an illusion which, from a practical point of view, is important. Then, again, an objection has been raised to the effect that though in the course of historical development human life becomes richer and more varied, it remains doubtful whether or not the increase of happiness counter-balances the increase of misery, and whether virtue and vice do not grow *pari passu*.

Those who hold this view maintain that the question cannot be satisfactorily settled by an appeal to statistics, and that the optimistic view of progress is but a mere guess, both optimists and pessimists being without an unit of measurement, and having to compare incommensurable magnitudes.

A satisfactory basis for the Progress theory could be found only in its logical and ethical content. And we can find it here only on condition that worth and definite significance cannot be assigned to life and historical development, except on the supposition that this development does in point of fact carry on and realise the never-ending advance of humanity—every element of the process being of value, not in itself, but as an integral part of the whole movement—that movement being itself the Real Reality and the Good-in-itself.

In Dr. Siebeck's opinion, this view overlooks the fact that the supposition of ceaseless and inevitable progress, while it assigns Perfection to the Whole, makes it impossible for the Parts--persons and events are robbed of individual importance—hence the worth and intelligibility of the world generally cannot be established by reference to the progress of mankind as a whole. Such progress may be conceived (1) as going on endlessly, or (2) as advancing towards a definite final condition. With regard to the first, its whole force and value must be

sought just in the very continuity and dynamic advance of the process. In the attempt to assign worth to it, however, a barren circle is inevitable; since the worth of the whole must depend upon the worth of its constituent parts—while, on the other hand, these latter have value or worth only as constituents of the whole.

In this connexion the weighty problem of the existence of Pain, Evil and Sin comes to be considered. And from the present point of view the only explanation and justification that can be given of the sufferings of individuals is that their pain was necessary for the development and perfecting of the whole—the earlier comer suffers for the benefit of the later. But, since pain seems never to vanish, this only amounts to saying that antecedent pain and pleasure determine the pain and pleasure which come after. And so with sin. Hence Ethics is resolved into Dynamics, and the contrast of good and evil appears as a mere illusion.

The variation of view according to which the course of progress results in a kind of millenium, in a final improved condition to which all previous stages have led up, is no more satisfactory. For, however long it were to last, it would be a state of stagnation; hence ethically unsatisfactory, and not worth having. But, further, human life upon this planet must come to an end within a measurable time. Hence it would seem that the only effect of all which has been done and suffered by past generations is to make the lives of an indeterminate number of persons during a measurable time a little better and a little happier than their own. And this surely is no sufficient account of the final significance of human life and the existence of suffering and sin.

These difficulties are not avoided by holding that it is Moral Perfection and not Happiness that is attained in this final stage—in which men will, as it were, enter into the moral labours, the efforts and struggles of their predecessors. Here Dr. Siebeck appears as an advocate of the view that there is no moral goodness without effort; and accordingly pronounces that this easy millenial morality is not truly moral, and is less worthy than any previous stage.

The fact, however, remains that it is impossible to deny that progress has taken place in human society. Dr. Siebeck does not profess to consider, here, the test by which progress is to be measured; but appeals confidently to the opinion of civilised men on the point.

Progress in this sense—the capacity of educing what is more perfect from what is less perfect—is not quite the same as progress as explained at the beginning of the essay. For it now appears as something of which man is capable, and which he is called upon to accomplish. Human progress is not a necessity of Nature—for peoples are stationary and retrogressive as well as progressive. Advance to what is better is a task—an ethical task which man may accomplish or may fail to accomplish. Thus regarded, progress is in accordance both with historical fact and with the requirements of logical thought. It is satisfactory ethically; and the ultimatum of ethics on the subject may be summed up in the words (addressed to the individual man):—

> "Es ist nicht draussen, da sucht es der Thor;
> Es ist in dir, du bringst es ewig hervor".

Geschichte der Philosophie. Von JULIUS BERGMANN. Bd. i., Die Philosophie, vor Kant; Bd. ii., 1ste Abtheilung, Von Kant bis Einschliesslich Fichte. Berlin: E. S. Mittler und Sohn, 1892. Pp. 456, 251.

This work is intended for readers who are interested in History of Philosophy, not for literary or antiquarian reasons, but because of their

interest in Philosophy itself. Its special claims to attention are, according to the author : (1) the unusual fulness and completeness with which the leading systems are presented, and (2) the numerous discussions in the way of criticism or elucidation which are interwoven with the general exposition. On a careful reading both these claims are found to be well substantiated. The exposition is in general very full and very lucid, and it is evidently founded upon a thoroughly accurate and careful study of the original sources. The least satisfactory part is that which is concerned with Ancient Philosophy. The essentially materialistic point of view of the pre-Socratic thinkers is not sufficiently recognised. The statement that Parmenides regarded the universe as a mere thought is neither credible in itself nor supported by the evidence. His affirmation that thought and being are the same is easily susceptible of a different interpretation. It probably means that we cannot think without thinking of some being, and that therefore not-being is unthinkable, *i.e.*, absurd. The account of Plato's Theory of Ideas is scarcely likely to find favour with specialists. Only 20 pp. are given to the Fathers and the Schoolmen. Bacon and Hobbes are classed with the forerunners of modern Philosophy, as in Erdmann. A leading place in the history of philosophical development is denied to Bacon; but Mr. Bergmann does not appear to us to appreciate his significance.

The exposition of Descartes is distinctly good ; Spinoza is admirably treated, and the same may be said of Leibniz. Locke, Berkeley, and Hume are presented in an appreciative and helpful way. The account of the Kantian system is clear, careful, and likely to be useful. But like every account of Kant it is of course open to dispute in some points. Bergmann thinks that Kant regarded the empirical order of phenomena as determined, not by the thing-in-itself, but by the productive imagination.

The 'critical and explanatory discussions' which are interwoven with the general exposition of the various systems contain much interesting and instructive matter. Among the most noteworthy are those relating to the ontological argument for the existence of God as formulated by Descartes (vol. i. pp. 237-245), the mutual connexion of substance, attribute, and infinite mode in Spinoza (*Ib.*, pp. 287 *seq.*), Spinoza's view of the human mind as the idea of the body (*Ib.*, pp. 307, 311), and the Kantian conception of synthetic *a priori* judgments (vol. ii. pp. 27-37).

As regards this last point, Bergmann maintains that all so-called synthetic judgments *a priori* are really analytic. The true question, according to him, is: How is it possible for analytic judgments to advance knowledge? His solution of this problem is based on the possibility of two concepts referring to an identical object in such a way that their difference is merely a difference in our mode of considering this object. Thus the concept of the straight line drawn from the point *a* to the point *b* and that of the straight line drawn from the point *b* to the point *a* have an identical objective reference. The whole discussion is well worth reading.

It must be said in conclusion that the book has one very serious defect. From beginning to end there is an entire absence of reference, both to original sources and to works on the History of Philosophy.

Ideale Welten nach Uranographischen Provinzen in Wort and Bild. Ethnologische Zeit -und Streitfragen nach Gesichtspunkten der Indischer Völkerkunde. Von A. BASTIAN. Berlin : Felher, 1892. 3 vols.

Dr. Bastian is well known as a learned and laborious writer on ethnological subjects and one whose works have a certain amount of value.

In this large work he deals with a number of questions in Oriental philosophy and comparative mythology concerning which he gathered materials during his visit to India in 1889-91.

In his first volume he deals with a variety of topics, Buddhistic, Brahmanic, and Jain, treating them with such overwhelming discursiveness, and interspersing his text with such a profusion of quotations from all sorts of authors, that the study of his large and closely printed pages is no light task.

Most of the topics discussed, such as the various theories of psychology, soteriology, and symbolism, Karma, Nirvana, Lingam Worship, Atma, &c., are familiar to students of Indian Philosophy. To such there is not much of novelty or originality in this part save some parts of his attempts at the demonstration of the inter-dependence of all philosophic and religious systems, Christian, Indian, Chinese, &c. He has been at enormous pains to collect and collate the statements and views of all sorts of authors on these subjects.

The second volume treats of the special points of contact of India and its philosophic literature with primitive Ethnology and History. The third and most interesting is occupied by a discussion of the philosophy, cosmogony, and theogony of the Jains, concerning which he has gathered a prodigious number of extracts from the copious literature of the subject, much of which is familiar to readers of the journals of the Asiatic and kindred societies.

After the manner of most popular writers on these subjects, Dr. Bastian's text bristles with words and names in Sanskrit, Pali, and other Oriental languages. Its utility as an exposition of Eastern philosophy is marred by a want of system in the arrangement of the cumbrous and imperfectly digested mass of material which the author has accumulated, which makes any analysis a matter of difficulty. To the student who has made a special study of Oriental philosophy, this laborious treatise will be of some interest, and much of it is suggestive, although it may not add much to his knowledge; but to the general school of psychology it presents few features of sufficient attractiveness to repay the labour and pains which its perusal entails. The work is illustrated with twenty-two mythological tables and figures taken from original sources and explained at length, showing Buddhistic, Jainistic, and Brahmanic schemes of the Universe and various special phases of mystical, symbolic, and eschatological beliefs.

Ueber den Hautsinn. Von Dr. phil. et med. MAX DESSOIR, Privatdocenten an der Universität zu Berlin. Separat-Abzug aus Archiv für [Anatomie u.] Physiologie, 1892.

This paper contains the first two chapters of an investigation into cutaneous sensibility,—a phrase which is interpreted by the author in the widest significance. The chapters deal respectively with sensation in general, and with the temperature sense: the third is to treat of sensations of contact, pressure and muscular contraction, the fourth of the common sensations.

The introduction is mainly terminological and epistemological. Sensation is defined as a not further analysable idea of sense, which is characterised by the consciousness of the subject's mental activity; perception is a compound idea of sense, in which the participation of the subject naturally recedes into the background. These definitions are open to objection on more counts than that of cumbrousness: the passage from inner to outer, attending that of simple to complex, is left

unexplained, and sensation-content is needlessly (needlessly for psychology) separated from sensation-act. Quality is ascribed, for what appear to be insufficient reasons, to perception alone. In the account of concomitant sensations, the truly synergic processes (visual, auditory) are not mentioned. A long and careful discussion of specific nervous energy leads to the conclusion, praiseworthy for its modesty, that " to every sensible apparatus there belongs a specific excitation; to every area of the cerebral cortex, a specific function ". The externalisation (projection into the external world) and eccentric projection (peripheral bodily localisation) of sensations are 'explained,' in Münsterberg's way, by the amount of muscular work which accompanies them.

New classifications are proposed of sensations (according to neural substrata and peripheral extent), of stimuli (as mediate, immediate, and both), of concomitant sensations, of after-sensations, and of reflexes. The science of mechanically stimulated cutaneous perception is neatly termed 'Haptics'. Haptics is subdivided as follows:—

A. Sense of contact.
  (1) Contact-sensation proper (*Berührung*): subject passive.
  (2) Pressure-sensation (pressure and pull): muscles in play, subject active.[1]

B. Pselaphesia ('handling'-sense).
  (1) Touch-sensation (pressure *plus* movement).
  (2) Sensations of the muscle-sense.

This table is to represent the course of development of cutaneous sensibility, phylogenetically and ontogenetically. The quality-differences marked off by the author are not likely, I think, to meet with general acceptance: but criticism must be reserved, till the two final chapters of the research are published.

The discussion of the temperature-sense opens with a consideration of its position as regards the other senses. It is rightly looked upon as a single modality, embracing the two qualities of heat and cold. What will excite most controversy in this section is the negative result of the writer's investigation into the 'points' of Blix and Goldscheider. Dr. Dessoir's criticism of Goldscheider's thermal (areal and punctual) stimulation-method seems unexceptionable; but it is different with the thermally indifferent, mechanical stimulation,—at least in the cases of cold and pressure. If one may judge from sporadic experimentation, I greatly doubt whether the results of this portion of the research can be generally valid. But the only adequate answer to them would be given, as the author says, by a renewed systematic testing of the sense-organ.

He himself assumes that there is a single terminal apparatus for the sense of temperature, and that its excitation is directly dependent on the quality of the stimulus. In the cold-sensation, the normal heat of the skin sinks, and the end-apparatus expands; if the heat of the skin be increased, the end-organ contracts. Thus there is a twofold chemical molecular process, of which the nerve trunks are indifferent conductors. This does not, however, explain the temperature reaction to indifferent stimulation; a reaction which exists, whether the 'spots' can be re-

[1] Active in the sense in which the subject is active in auditory and visual perception. But in normal perception the activity of the subject is not prominent at all (pp. 182, 243). This is only one of a number of minor inconsistencies, which the reader of Dr. Dessoir's introduction must notice.

localised by the subject or not. How Dr. Dessoir meets the difficulty will be seen later.

Urbantschitsch's assertion that continuous temperature stimuli are sensed as fluctuating in intensity is confirmed. The fluctuation is not periodic. Experiments are also quoted which show that, of a succession of similar temperature stimuli, the first are sensed as similar, the following as increased, and the last as decreased in intensity. They are based on the assumption that the rapidity of the transition to pain is a measure of the intensity of the sensation. The results of electric stimulation of a nerve-trunk were, for fourteen of nineteen reagents, negative. The remaining five persons reported sensations of burning; but in most cases it is doubtful if these were pure temperature sensations. Where this was the case, one might have recourse for explanation to vasomotor processes, or to the end-organs of 'touch' present in perineurium and epineurium.

There follow sections dealing with the anatomy, pathology, and physiology of the temperature sense. After a discussion of the present state of our knowledge of the anatomy of the sense-organ, the author proposes to determine the special anatomical relations of temperature sensation by a method of exclusion; cutaneous areas are to be found, which are insensible only to temperature, and these are to be compared with areas whose sensibility is complete. Three such areas were discovered: the mucous membrane of the respiratory nasal cavity, the lower sections of the œsophagus, with the stomach, and the *glans penis*. In spite of the writer's objection to free nervous endings (Goldscheider), the result of preliminary investigation of the *glans* points to them as the structures sought.

Experiments on dogs indicate the *G. sigmoideus* as the cortical area for temperature sensation. From pathology the conclusions are drawn: that the temperature-sense is within limits independent of the other senses, and stands nearest to pain;[1] and that its sensations arise in the lower layers of the epidermis.

The physiological investigation is concerned with the difference in temperature sensibility of different parts of the body (thickness of skin and influence of normal skin-temperature unimportant; maximum differently localised from that of the pressure-sense and 'space-sense'; fluctuation less than that of these two senses): with the upper and lower (pain) limits of temperature sensation: with the temperature 'circle' (figures only preliminary; smallest interval for cold, 1, 2 mm.; for heat, 1, 9 mm.): with the influence of the magnitude of the stimulated surface on the intensity of sensation (a general dependence, neither logarithmic nor proportional): with the dependence of the sensible discrimination on the magnitude of the stimulus (discrimination finest in the neighbourhood of the physiological zero-point; no confirmation of Weber's law): with after-sensations (cancelled by an opposite excitation, strengthened by renewed excitation of like quality; intermittent,—*cf.* Urbantschitsch's acoustical after-image; continuous,—duration determined by a method not wholly free from objection; the time-limen for heat fixed at 0, 5″): and with contrast (successive stronger than simultaneous; small stimulus-intensity to be compensated in this connexion by large extension).

[1] The term 'pain-sensation' is employed throughout the research to designate the sensation-feeling fusion, which constitutes the reaction to terminal stimulation. A similar inaccuracy characterises the use of the word *Gemeingefühl* (*cf.* pp. 230, 237).

The temporal and spatial relations of the temperature-sense to the sensations of contact and pain are next reviewed. It was found that 'deceptions of judgment' occur with minimal stimulation of the skin. This was to be expected; and the result is only important as giving the true explanation of Wunderli and Fick's experiments. Weber's *thaler*-phenomenon is restricted to the limits + 50° C., and "very cold". As regards reaction-time: Goldscheider's topography of the temperature-sense was proved to be correct, and Dr. Dessoir's figures agree with his, and with those of Tanzi and Herzen. It was further sought to determine the time elapsing between the sensations of contact and cold, contact and heat, heat and pain. It is not necessary to present the results in detail, but it must be said that neither the procedure nor the criticism of this section can wholly escape objection.[1]

To sum up. A psychophysical theory of the temperature-sense must take account of cutaneous processes and of nervous processes. Apart from its relations of time and space, the sensation is influenced by the thickness of the epidermis above the sensitive layer, by the conductivity of the different layers of the skin, and by the proper temperature of the sense-organ. The nervous processes have been variously described: but no description—Lotze's oscillations; Fick and Wunderli's space relations of the gradation of excitation-intensities; specific nerves and spots; Hering's assimilation and dissimilation—is satisfactory. Rather are these, as has already been said, a single end-apparatus, and a twofold chemical molecular process. Indifferently stimulated sensation-differences are due partly to suggestion and to "peripherally conditioned fluctuations of the attention," partly to the fact that the stimulation is *not* indifferent (variation of pressure; vascular relations of the skin; temperature of the stimulus-point). That some of these factors may be *veræ causæ* one cannot deny: but others are irrelevant,—and the attention-phrase surely represents an attempt to serve God and Mammon.

Dr. Dessoir would, of course, admit the incompleteness of his investigation. His aim is to review the literature of psychological and physiological haptics, and to present a theory which is adequate to our present knowledge. The positive value of the research cannot be estimated till it is concluded. This preliminary instalment is somewhat overburdened with classification and definition: but it boldly challenges much that has passed for proven, and will undoubtedly stimulate psychophysicists to further work upon the 'lowest sense'.

E. B. TITCHENER.

Spinoza's Eskjendelsestheori. Af J. M. VOLD.
Æsthetik. Af M. J. MONRAD. Kristiania, 1892.

Before giving a short notice of the books named, it may interest the readers of MIND to know that the study of philosophy is not neglected in the land of the Midnight Sun.

During the last thirty years not fewer than forty works in this department of literature have appeared. Some of these are of considerable dimensions and involving much research and thought. Prof. Vold, in addition to the work which we purpose to bring under the notice of the readers of MIND, has also published critical works on Kant and Lotze. Prof. Monrad has written on the higher Logic and an exhaustive work of 509 pages on the Philosophy of Religion.

The treatise of Prof. Vold on Spinoza is a work of great ability. It is the result of a profound study of all his writings. No statement which

[1] *Cf.*, especially, pp. 311, 312.

would be helpful in establishing and elucidating the point under discussion has escaped the notice of our author. Prof. Vold is also at home in the history both of ancient and modern philosophy and can consequently trace the relation of Spinoza's speculations to his predecessors and the influence he has exerted on later philosophers. The aim of the work is to set forth clearly the theory held by Spinoza as to the origin of Knowledge and its relation to his Metaphysics. The work is introduced by a sketch of Spinoza's position in relation to Descartes, the Cabbala and the Old Testament, to Maimonides and above all Bruno. This sketch leads Prof. Vold to two results: first that Spinozism in its contents shows the influence of Jewish Orthodoxy and of the Cabbala, of Bruno and above all of Descartes, and secondly that in his Criterion of truth he has been much indebted to Descartes, while in his mystic, intuitive principle of knowledge he is indebted to Maimonides but above all to Bruno. In expounding Spinoza's theory of knowledge the nature of thought and its elements are expounded. This leads Prof. Vold to set forth clearly Spinoza's relation to Scepticism. The reality of knowledge, it is shown, is a fundamental principle with Spinoza. Then in the fourth chapter an exposition is given of Spinoza's idea of ideas, which is not the mere repetition of ideas but the higher comprehension of these. The next chapter gives a full analysis of Spinoza's Criterion of truth, which is found to exist in the inner sequence of thought, this sequence revealing itself through the individual thought-act. From the sixth to the eleventh chapters Prof. Vold discourses with much fulness and clearness on the different kinds of knowledge according to Spinoza. In the chapter following these our author's metaphysical capacity is shown in the masterly way in which he analyses Spinoza's subtle distinction between infinite and finite; being and existence; substance as the cause of itself; God and the Divine attributes; the eternal and the finite modes. The fifteenth chapter treats such subjects as Spinoza's doctrine of Induction and Analogy (compared with that of Stuart Mill); Experiment, Hypothesis; the nature and value of Syllogism (compared with the view of Stuart Mill). The last chapter discusses Spinoza's conception of the principle of identity and opposition. Prof. Vold concludes with a brief summary of the leading ideas of Spinozism. His system is built on the supposition that truth consists in the presentation in thought of an objectivity existing externally and which therefore is accessible for men. Knowledge besides expresses a causal relation and consequently definition of two realities, *viz.*, subject and object. Adequate knowledge demands that thought, besides its existence as thought, embody an objectivity wholly independent of itself (which with Spinoza is expressed by the term extension), wherefore it follows that the Criterion of truth is to be found in the quality of our thinking in regard to thought (i tænkingens karakter af tænkning), *i.e.*, in the logical sequence. As an act of judgment is to be taken as a process in concepts, so may all existence be comprehended by means of a principle, the actual definite thought by means of thought as such, *i.e.*, as an element in the absolute or divine thought, the bounded extension as a part of the divine extension. Thought and extension can thus be thought of absolutely and between these absolute realities there may exist some relation as between subject and object of knowledge. All existences, including the human soul and the human body, are thus to be conceived modes in a divine attribute. All being is to be thought of as a synthetic-analytic process from God to nature and inversely; these two processes are combined in a higher unity in substance as *causa sui*, even as in human thought the double process is united in a higher intuitive stage.

We leave Prof. Vold's able work with the expectation that before many years have elapsed he will publish the results of his research in a special subject belonging to the departments of psychology and philology.

The space at our command will only allow a few sentences on Prof. Monrad's Æsthetics. His work is the result of a profound study of Plato, Aristotle, and Plotinus among the Ancients, and of Kant, Hegel and Vischer among the Moderns, combined with the observation of the types to be found in nature and art. The first book is devoted to the investigation of the idea of beauty from the subjective and objective side. The second book traces the idea of beauty in inorganic and organic nature. The third book enters with great fulness into the idea and problem of beauty in art and of its manifestation in Architecture, Sculpture, Painting, Music, and Poetry. We shall only add his description of beauty. As regards form he defines it as that which has unity in manifoldness; but in this manifoldness, unity, the law of form, exercises a dominant influence over the parts, which are nothing in themselves, but only a mechanical outcome of the law of unity, so that even where individual parts seem to forsake the general rule, yet have they the principle ruling the whole inherent in them, so that they coincide with the general law of harmony. The real beauty he defines as that which is expressive (udtyksfuld), so that the contents are set forth with a suitable measure of clearness and completeness, and that the form show itself as naturally springing from the contents. The idea of perfect beauty, according to Prof. Monrad, is that of a representative both of the supersensuous boundless idea, and of the sensuous bounded phenomena, in which the idea reveals itself in the phenomena, and the phenomena shines forth in the light of the idea.

ALEX. WITHER.

Mr. C. W. Opzoomer, Een herinneringswoord door Jhr. B. H. C. K. VAN WŸCK, Hoogleerar te Utrecht. Utrecht: C. H. E. Breÿer, 1893. Pp. viii., 88, with portrait.

This memorial notice of Opzoomer, who died last year, was drawn up at the request of the Dutch Royal Academy of Sciences by his faithful pupil, friend, and successor in the Chair of Philosophy at Utrecht. Professor Van der Wÿck has discharged his task with admirable judgment and taste, and has given an impartial and instructive account of the philosophical development and work of the distinguished Dutch thinker. He treats of Opzoomer as a philosopher, as a jurist, as a writer, and as a man. The philosophy of the founder of the empirical and critical school in Holland is expounded with great lucidity, and its relations on various sides concisely elucidated. His work as a jurist is also well indicated and estimated. Opzoomer was a born artist, and the ease and fluency of his style are deservedly commended. His upright, cheerful character, grave dignity, added grace to all his work, and secured the admiration and affection of his many friends and pupils. Notwithstanding his disappointment at not being transferred to the Chair of Philosophy at Leyden, he lived a successful and happy life, and during the protracted illness and weakness of his last years he showed a noble example of patient suffering and resignation. "Zacht ruste Opzoomer's assche!"

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H. Vaihinger, *Commentar zu Kant's Kritik der reinen Vernunft*, Bd. ii., Stuttgart, Berlin, Leipzig, Union Deutsche Verlagsgesellschaft, 1892, pp. viii., 563.

G. Spicker, *Die Ursachen des Verfalls der Philosophie in alter und neuer Zeit*, Leipzig, G. Wigand, 1892, pp. v., 280.

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M. Offner, *Ueber die Grundformen der Vorstellungsverbindung*, Marburg, Universitäts Buchdruckerei, 1892, pp. 67.

F. Maltese, *Esodo*, 2 vols., Vittoria (Sicilia), Velardi e Figlio, 1892, pp. 230, 230.

Pietro Ceretti, *Saggio circa la Ragione Logica di tutte le Cose*, vol. iii., *Essologio*, Torino, Unione Tipografico-Editrice, 1892, pp. 1491. (In two parts.)

NOTICE follows in all cases.

VIII.—PHILOSOPHICAL PERIODICALS.

THE PHILOSOPHICAL REVIEW.—No. 7. O. Pfleiderer—The Philosophy of Religion. [Philosophy of Religion has (1) to ascertain the essence of religion by psychological and metaphysical investigation and (2) to trace the stages of its historical evolution at once in external historical experience and in the facts of inner personal life.] J. Clark Murray—An Ancient Pessimist. [Treats of Hegesias the Cyrenaic. The Cyrenaics had originally taught that pleasure is the *summum bonum* and that it is attainable by virtue. Theodorus, however, denied that virtue led to happiness. Hegesias went further and denied that happiness was attainable, while continuing to regard it as the chief good. Thus the only reasonable end, according to him, was avoidance of pain. Cicero mentions him as an advocate of suicide.] F. C. French—The Concept of Law in Ethics. ["In early times legal and moral ideas were indiscriminately combined under the general notion of customary law." Morality begins to be discriminated from mere legality when unwritten is distinguished from written law, as in the well-known speech of Antigone in *Sophocles*. The next stage is the distinction between *nature* on the one hand and *law* as the enacted will of human beings on the other. This idea of law, which in its first tendency was "subversive of all morality," is traced back to the Sophists. The Stoics represented the order of nature as expressing a law enacted by a universal reason as order in human conduct is brought about by enactments of human reason. On this conception of cosmic law they based their ethical system. "The grand principle of human life (in their view) is to live according to nature—to conform the individual to the universal and rational." "The universe is one city governed by one law of nature; and hence all rational beings, as subjects of this law, must be fellow-citizens of the one world city." "This Stoic notion of natural law furnished an ideal and ethical basis for the practical legal institutions of Rome." In spite of the opposition of the founder of Christianity to the legalism of the Scribes and Pharisees and his insistence upon 'inwardness,' Christian Ethics assumed a decidedly jural form. The reasons are assigned for this by Prof. French. (1) The Hebrew origin of Christianity; (2) The constant effort of the early Christians to have as little as possible to do with secular courts, and to substitute their own "divine code" for the civil code. "The moral maxims of the new religion, taking the place of all civil law for 300 years, became stamped themselves with the jural form; (3) Roman influence. "The mere translation of the New Testament into Latin gave to Christian doctrine a decidedly jural tone"—the very language being saturated with legal concepts. In the ethical system of Thomas Aquinas the notion of law occupies a highly prominent, if not the first, place—law being for him primarily and ultimately the command of God. Modern Philosophy previous to Kant substituted for this Theological Conception that of the law of nature, thus reverting to the Stoic point of view. With Kant originates the conception of the moral law as imposed on man by himself through the autonomy of Reason.] H. Griffing—J. H. Lambert: A Study in the Development of the Critical Philosophy. [Proceeding from evidence derived from the correspondence between Lambert and Kant, the writer argues that it was probably Lambert's view "that formed the starting-point of the Kantian conception of the transcendental ideality of time and space".]

American Journal of Psychology.—Vol. v., No. 2. W. L. Bryan—On the Development of Voluntary Motor Ability. [Gives an account of an elaborate and apparently very careful series of experiments (1) on the "maximum rate of voluntary rhythmically repeated movement" in boys and girls and of its increase and decrease as determined by age; (2) on the precision of movements in the same subjects and its variation according to age. Many results of more or less interest are obtained. "The amplitude of movement may be changed within wide limits without affecting the rate." The period from twelve to sixteen in girls and thirteen to sixteen in boys exhibits in turn acceleration, decline, and recovery of rate ability. In normal individuals the precision of voluntary movement is subject to much greater variation than is the maximum rate of movement. Increase in accuracy is much greater in the two or three years following the age of six than later.] J. E. Le Rossignol—The Training of Animals. A. Dogs. [Bibliographical.] J. Jastrow—On the Judgment of Angles and Positions of Lines. [(1) The subject was required to reproduce angles of 15°, 30°, 45°, and so on up to 165°. One side of each angle was given and the lines were drawn on square pieces of paper with one line parallel to the side of the square. The result was that angles with a small excess over 0° or 90° were more exaggerated or less underestimated than angles with a greater excess over 0° or 90°. The smallest and largest angles form an exception to the generalisation that acute angles are underestimated and obtuse angles overestimated. (2) The positions of lines were reproduced without reference to any but imagined co-ordinates. The absolute error was small and on the whole consisted in an overestimation of the angles—greater with obtuse than with acute angles. No definite law could be formulated owing to the irregular variation of the results.] C. M. Child—Statistics of "Unconscious Cerebration". [An interesting and valuable statistical investigation, after the method of Galton, of subliminal process leading to recall of names, waking at a given hour determined upon before going to sleep, solution of problems which had defied conscious effort, and spontaneous occurrence of novel ideas or discoveries. Over ninety persons were examined. The questions were well chosen and searching. Making all reasonable allowance for the inevitable roughness of the statistical method, the results certainly show that striking instance of mental process taking place in detachment (? complete) from the main stream of conscious life and issuing in a result which appears in consciousness are by no means uncommon occurrences.] M. W. Calkins—Experimental Psychology at Wellesley College. Under the head of Psychological Literature, Prof. Baldwin gives an account of recent papers on Action and Volition.

Brain.—Pts. lix. and lx. A. D. Waller—On the Functional Attributes of the Cerebral Cortex. [An interesting though somewhat speculative discussion. Stress is laid throughout on the inseparable union of sensory and motor process. Every excitation is *ipso facto* also a discharge. An attempt is made to show an essential affinity between "Wundt's theory of an apperceptive centre, Jackson's highest level centre, Ferrier's doctrines *re* pre-frontal cortex, Munk's psychical area". Dr. Waller takes occasion to defend his paper on the "Sense of Effort" against the objections of Müller and Delabarre.] J. Michell Clarke gives a copious account of recent literature relating to hysteria.

Part xxiii. of the Proceedings of the Society for Psychical Research commences with the paper read by Prof. Delbœuf, at the International Congress of Experimental Psychology held in August last, on

the appreciation of time by certain "somnambules". It gives an account of experiments on two rustic girls, who were ordered in the hypnotic state to perform several acts post-hypnotically at intervals varying from 350 to 3300 minutes; the time being always stated in minutes in giving the order. The degree of accuracy with which the orders were accomplished, taken together with the very limited power of calculation possessed by the girls, seems to M. Delbœuf to point to an unconscious power of measuring the lapse of the time, of which the *modus operandi* is at present inexplicable. Mr. Myers continues his series of articles on the "subliminal consciousness". In the present number he deals with "sensory automatism and induced hallucinations": treating chiefly but not solely of hallucinations self-induced, with the aid of some simple instrument; visual hallucinations being facilitated by gazing into the polished surface of a globe of crystal or glass, or a glass of water, auditory hallucinations by holding a shell to the ear. Both these methods of obtaining hallucinations are known to students of the history of divination: but their use for purposes of psychological experiment is comparatively novel; and the experiments on shell-hearing here briefly recorded are probably the first of their kind. A certain portion of the hallucinations described—but by no means all—are regarded by Mr. Myers as evidence for telepathy or clairvoyance; and, from this point of view, are compared with the external facts to which they are held to correspond. There are further two papers in which results of experiments in thought-transference are carefully recorded: one by Dr. A. Blair Thaw, and the other by Mrs. H. Sidgwick and Miss Alice Johnson. The degree of success attained by Dr. Thaw, who experimented chiefly with Mrs. Thaw and a friend, does not appear to have been brilliant; though the coincidence between guesses and facts is certainly greater than a calculation of chances would have led the experimenters to anticipate. In the case of the results obtained by Mrs. Sidgwick and Miss Johnson, the hypothesis of mere chance coincidence is driven to a higher and more definitely calculable degree of improbability: since in guessing numbers of two digits, drawn at random from a bag containing all the numbers from ten to ninety inclusive, twenty-seven completely right guesses were recorded in 252 trials. The odds against this happening by chance are, as the writers of the paper say, enormous: and since the experiments were made with the "percipient" and the "agent" —each attended by an experimenter—in different rooms, or respectively in a room and a passage divided by a closed door, it is difficult to see how the ideas could have been conveyed through the ordinary channels of sense, without an elaborate conspiracy of deception. The paper also contains a long description of experiments in thought-transference of mental pictures, with agent and percipient in the same room: and also an account of experiments in the production of local anæthesia and rigidity, apparently by mental suggestion. These latter are similar in kind to the experiments by Edmund Gurney described in vol. v. of the *Proceedings* of the S. P. R., but they carry somewhat further the exclusion of possible suggestions through the ordinary channels of sense.

In the INTERNATIONAL JOURNAL OF ETHICS Professor Giddings writes on "The Ethics of Social Progress"; his article contains a good deal of disputable sociology delivered in an overdogmatic tone, but his refutation of socialistic fallacies is clear and effective, and his general forecast of the future progress of society is sober and judicious. "The ethical consciousness of society" he holds is demanding, in a manner "daily more imperative," a "public and private philanthropy that shall be governed

by the results of scientific inquiry". For the practical solution of the problem two difficult things must, he thinks, be combined, "to convince one set of people that society ought to assume the costs of its" industrial "progress, and so far as possible take openly the responsibility for replacing the displaced"; and to convince another set of people "that at all times a portion of mankind must be relatively useless to the community, and for that reason, relatively poor; and that their greatest possible utilisation and compensation depend on their being held for the while in practical subjection to other individuals or to the commonwealth". Accordingly, Prof. Gidding proposes—besides more familiar remedies for social evils—the "enslavement" of tramps. The Rev. Dr. Cunningham writes on "Political Economy and Practical Life"; his chief suggestion for practical life is a variation of Mr. Booth's scheme of old-age pensions, restricting its advantages to poor persons who have never during their working life been the recipients of parish relief in any form. Besides these there is an article by Professor Mary E. Case, answering in the negative the question, "Did the Romans degenerate?" and Dr. Richard Meyer writes at length on "German character as reflected in the national life and literature". It is noteworthy that of the four articles the two that are not historical are mainly economic: which suggests a doubt whether Dr. Cunningham is right in thinking that there is a "general and increasing apathy about economic science". The reviews are as usual abundant and mostly interesting; and a "Report on the recent literature of ethics and related topics in America" by Professor Royce is a commendable feature of the journal.

Revue de Metaphysique et de Morale.—Première Année, No. 1. We heartily welcome this new periodical, which, as we gather from M. Leon's Introduction, is to be the organ of a speculative movement among the younger students of Philosophy in France. All success to them! F. Ravaisson—Metaphysique et Morale. [A vindication of Metaphysics against positivist criticism and an assertion of the dependence of ethical on metaphysical doctrine. The article consists in great part of a bright and clear sketch of the History of Philosophy showing its progressive developments as marked by a series of epoch-making names.] F. Rauh—Essai sur quelques Problémes de Philosophie Première. [An interesting paper, full of close analyses, but rather hard to grasp and almost impossible to summarise. It begins with an analysis of the fundamental certainty of self-consciousness as formulated by Descartes. This involves the affirmation,—it is *true* that I think. The faculty of distinguishing between truth and falsehood is presupposed in it. Reflexion on this fact enables us to see wherein the form or essential nature of truth consists. Truth is not anything separable from our cognitive consciousness itself. It does not imply the separate existence of any object distinct from thought itself. Yet it is not dependent on the momentary act of thinking as an occurrence in the history of the individual. It rather consists in the *validity* of the thought, and so regarded it is immutable and eternal. "It is thus a kind of internal necessity, which, though it is not distinct from the intellectual consciousness itself as something extraneous to it, yet constitutes its object." This pure and primary intellectual certainty is at the same time a moral certainty. "If I cannot doubt that I think, while I am thinking, it is nevertheless within my power to think or not to think, to exercise my reason or not to exercise it. Before recognising itself as logical intelligence, the intellectual consciousness must posit itself" as free practical activity. This analysis of self-consciousness furnishes M. Rauh with

a point of departure in the treatment of the leading problems of Philosophy.] H. Poincaré—Le Continu Mathématique. [The writer considers the following questions: What precisely is the *continuum* of mathematical Analysis? What is the origin of the concept? Is it final? The ordinary definition is that the totality of all real numbers commensurable and incommensurable is the *continuum*. M. Poincaré points out that this is not a *continuum* in the metaphysical or physical sense, but that mathematicians have the right to their definition, since the concept so defined is always the actual subject-matter of analytical reasoning. After an account of the mathematical necessity for the introduction of incommensurables, he passes to the consideration of the origin of the concept. This he finds in the 'contradiction' inherent in 'physical continuity': two things indistinguishable from the same thing may be distinguishable from each other. To escape this contradiction, he says, the mind is forced to 'create' a series of symbols—the series of all rational numbers, integral and fractional. This series and all others constructed according to the same law he proposes to class under the name *continu mathématique du première ordre*. But there is a second series of 'contradictions' inherent in geometrical continuity, which can only be avoided by the introduction of incommensurables. The mind is forced to 'create' fresh symbols. Hence arises what M. Poincaré proposes to call *continu mathématique du deuxième ordre;* and this, he says, is the 'continuum' of Mathematical Analysis. It is nothing but a particular series of symbols 'created' by the mind, free from internal contradiction, and from contradiction with various propositions called intuitive but really derived from empirical notions. Finally M. Poincaré asks two questions: (1) "Is the creative power of the mind exhausted by the creation of the *continuum mathematicum?*" and (2) "Once in possession of the concept of the *continuum mathematicum* is it possible to escape from all contradictions analogous to those which gave rise to the concept?" He answers both questions in the negative. He cites, in illustration of the first question, the conception of the possibility of inserting between two infinitesimals, whose orders are infinitesimally different, an infinitesimal which may be as small as we please in comparison with that of the lower order and as great as we please in comparison with that of the higher order. The consideration of such cases gives rise to what he proposes to call the *continu mathématique du troisième ordre*. He cites, in illustration of the second question, the case of a curve which has no tangent, in which he finds a new 'contradiction' between intuition and Analysis. We cannot help thinking that M. Poincaré's notion of mathematical *continua* of different orders is misleading. It seems to us that the so-called *continuum* of the first order is a discrete aggregate, having none of the properties of a continuum except divisibility. Again, as it seems to us, the so-called *continuum* of the second order either is not the subject-matter of Mathematical Analysis, or it leaves no room for the possibility of the *continuum* of the third order. Without venturing to answer in the affirmative M. Poincaré's two questions we think we can dispose of his examples. What does the statement about infinitesimals of various orders mean if it does not refer to the possibility of assigning a law for the approximate calculation of a limit to a series of numbers? If it means this, the limit is included in that *continuum* which is the subject-matter of Mathematical Analysis. With regard to the curve which has no tangent, the only 'contradiction' that we can discover is between two definitions of the notion 'curve'. The curve of Geometry or Analysis, defined as a boundary or as the expression of a relation

between variables, can be shown to include something that is not included in the kinematical notion of a curve as described by a moving point. But the new thing cannot be intuited. We can have no intuition about a curve which cannot be conceived to be drawn. A. E. H. L.]

REVUE PHILOSOPHIQUE.—17me An., No. 12. E. Lannes—Le Mouvement Philosophique en Russie: II. La Philosophiè de Hegel et les Cercles Philosophiques. F. Paulhan—La Composition Musicale et les Lois Générales de la Psychologie. [Applies the principle of systematic association to the case of music.] Marillier—La Psychologie de W. James (2nd Art.). [Treats (1) of James's Heracleitean theory of mental process according to which two presentations occurring at different times can never have an identical quality; (2) of the doctrine of fringes and of the distinction between transitive and substantive states; (3) of the analysis of personality and the theory of self-consciousness which identifies the cognitive subject with each momentary thought as it emerges.] Among books reviewed are Renouvier's *Principes de la Nature* and Weismann's *Selection and Heredity*.—18me An., No. 1. L. Marillier—La Psychologie de W. James (3rd Art.). [Expounds and discusses James's doctrine of Attention, Conception, Discrimination, Comparison, Association, Reasoning, the Time-Perception, Memory. M. Marillier thinks that psychical Fringes are really obscure imagery—to which there are only two objections: (1) that they are not images, and (2) that they are not always obscure. He would also substitute relative intensity of presentation for selective attention as conditioned by interest.] J. J. Gourd—La Croyance Metaphysique. L. Couturat—La Beauté Plastique. —No. 2. Paul Janet—L'Unité de la Philosophie. [Defines philosophy as thought about thought. "Science thinks of the world; philosophy thinks of the thought of the world." From this point of view, Materialism, Positivism, the Subjective Phenomenalism of Mill and Taine, Criticism, and Metaphysical Idealism (under its two forms, Spiritualism and Pantheism) are subjected to a critical comparison.] J. Combarieu—L'Expression objective en Musique. [A careful analysis of the means and methods by which music is able to imitate objects.] L. Marillier—La Psychologie de W. James (concluded). [Opposes James's view that there is a difference in kind between impression and image and between their physiological concomitants; an account is given of James's theories of the space-perception, of belief, of the emotions and instincts, and of the will.]

PHILOSOPHISCHE STUDIEN.—Bd. viii., Heft 2. A. Kirschmann—Beiträge zur Kenntniss der Farbenblindheit, i. [The first part of what promises to be a most interesting investigation. (1) Prolegomena. (2) Diagnosis of colour-blindness. (3) Experimental results. (*a*) A bipolar system, with its saturation-maxima in yellow and indigo-blue. (*b*) A case of yellow-blue-green-purple blindness. (*c*) A red-green case. (*d*) Spectral colours are only blue and yellow. (*e*) An exceedingly important and well-examined case of violet-green-yellow blindness. The affection is congenital and unilateral. Critical remarks as to the explanation of these cases on the basis of the Young-Helmholtz and Hering theories are appended.] E. B. Titchener—Ueber binoculare Wirkungen monocularer Reize. [An attempt to show that stimulation of one retina occasions an excitation-process in the other. The psychophysical results are supported by recent physiological discovery.] O. Kuelpe—Das Ich und die Aussenwelt, ii. [Conclusion of this epistemological study, from Bd. vii., pp. 394 ff.]

ZEITSCHR. F. PSYCH. U. PHYSIOL. D. SINNESORGANE.—Bd. iv., Heft 3. A. Pick—Ueber die sog. Conscience musculaire (Duchenne). [Duchenne had noticed that in certain cases of total loss of the cutaneous and deeper-lying sensibility, the patients, if prevented from seeing their extremities, were unable to execute voluntary movements with them. The old view was, that the control by this one sense took the place of all the usual sensible controls. The author (*Neurol. Centralblatt*, 1891) substitutes for this the theory that it is the sensory attention which is the determining factor. He gives an historical and critical account of previously reported cases, and a record of his own experiments. The article would be much easier reading if its arrangement were better.] C. Ladd-Franklin—Eine neue Theorie der Lichtempfindungen. [A theory most nearly resembling that of Donders. There are two sorts of "molecules" in the retina—primitive grey molecules, and colour molecules—which have arisen from these by differentiation. The paper is a preliminary communication only.] Litteraturbericht.—Bd. iv., Heft 4 and 5. A. Koenig u. C. Dieterici—Die Grundempfindungen in normalen und anomalen Farbensystemen, und ihre Intensitätsvertheilung im Spektrum. [A preliminary note on this investigation was published in 1886; and Helmholtz made its results the basis of his articles in the *Zeitschr.* of 1891 and 1892. Monochromatic, dichromatic, and trichromatic systems are investigated. The authors distinguish between the phrases "elementary" sensation (no presupposition) and "ground" sensation (Donders' fundamental colour; presupposition of a simple nervous process). They differ from Hering (1) in not identifying monochromatic sensation with trichromatic white; (2) in sharply separating off red-blindness from green-blindness. It is impossible to give an adequate summary of the paper (107 pages) here. The writers conclude that, of the three ground sensations, the Red is a red inclining a little towards purple; the Green has the wave-length (about) 505$\mu\mu$.; the Blue, the wave-length (about) 470$\mu\mu$. Interesting is their confirmation of the fact (Rayleigh, Donders) that there are two distinct types of trichromatic systems. The article stands, of course, in close relation to the other recent publications of the school of Helmholtz (*Beiträge*, &c.).] K. L. Schaefer—Ist eine cerebrale Entstehung von Schwebungen moeglich? [A criticism of E. W. Scripture's paper "Ueber Schwebungen und Differenztoene," in the *Phil. Stud.*, vii. Scripture's results can be explained otherwise than as he explained them; he forgot to take account of "physiological deafness".] S. Fuchs—Ueber einige neuere Fortschritte in der Anatomie und Physiologie der Arthropodenaugen. Litteraturbericht. A lengthy notice, by F. Tönnies, of Simmel's "Einleitung in die Moralwissenschaft".

VIERTELJAHRSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. xvii., Heft 1. A Riehl—Ueber den Begriff der Wissenschaft bei Galilei. [Galileo investigates the *laws* of natural process instead of its causes; his method lies in the conjoint use of mathematical analysis and experiment.] R. Wlassak—Die statischen Functionen des Ohrlabyrinthes und ihre Beziehungen zu den Raumempfindungen (Schluss). [Summary of Mach's experimental results. A general formula for space-sensations is proposed. They are connected with annulment of changes in sensation by corresponding compensative movements.] H. Cornelius—Ueber Verschmelzung und Analyse (Schluss). [Follows up previous paper by investigating the fusion and analysis of simultaneous visual sensations, with results similar to those obtained for auditory. It is then shown that these processes occur also without essential difference in the case

of successive sensations. An attempt is made to connect the theory of fusion and analysis with Ehrenfels' investigation of Form-qualities. Finally, a general view of our intellectual life is propounded according to which it consists in the progressive analysis of the total presentation constituted in each moment by present sensations, and the residua of past experience blended into a single whole. The doctrine is not new, but it is not nearly so familiar as it deserves to be; it is very clearly and convincingly stated by Cornelius. A very good paper.] Chr. Ehrenfels —Werth-theorie und Ethik I. [Takes the economic conception of final utility as point of departure in the psychological analysis of the meaning of utility and value. A good article.] E. G. A. Husserl—A. Voigt's èlementare Logik' und meine Darstellungen zur Logik des logischen Calculs. [Personal polemic.] Anzeigen, &c.

PHILOSOPHISCHE MONATSHEFTE.—Bd. xxix., Heft 3 and 4. H. Heineck —Die älteste Fassung von Melancthon's Ethik. [A previously unknown manuscript of the 'Epitome ethices' is published.] K. Lasswitz—Die Moderne Energetik in ihrer Bedeutung für die Erkenntniss-Kritik. [Treats of the relation of energy and its transformation to sensible qualities. "Temperature, brightness, tone are as much 'Energy-factors' as volume, mass, or rapidity." They are not in any special sense subjective.] F. Staudinger—Die sittliche Frage eine sociale Frage. [Discusses the views of F. Lange and Th. Ziegler's "Die sociale Frage eine sittliche Frage".] B. Erdmann—Johann Eduard Erdmann. [An interesting biographical sketch, and a full bibliography.]

ZEITSCHRIFT FÜR EXACTE PHILOSOPHIE.—Bd. xix., Heft 3. G. Turié —Der Entschluss in dem Willenprozesse. C. S. Cornelius—Zur Theorie des Hypnotismus. Chr. A. Thilo—Ueber den Begriff der Kausalität bei Plato und Spinoza. Besprechungen.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK.—Bd. ci., Heft 2. A. Döring—Doxographisches zur Lehre vom τέλος. A. Wreschner—Ernst Platner's und Kant's Erkenntnistheorie. A. Lasson —Jahresbericht über Erscheinungen der philosophischen Litteratur in französischer Sprache aus den Jahren, 1889 und 1890. Dr. Ferdinand Tönnies contributes an obituary notice of Professor G. C. Robertson.

IX.—NOTES.

GEORGE CROOM ROBERTSON AS A TEACHER.

I speak as one who only came to know Croom Robertson in recent years, when he had nearly accomplished a term of respite between two attacks of the malady which finally carried him off. His exposition of ethical hedonism,—it was the middle of the session,—was tinged with the gloom of it. "Why look ahead," he asked, "to pleasure or a neutral object? It is sufficient to be wanting riddance of pain. We can resolve to do without positive pleasure, but we cannot live with pain and discomfort. . . . Such are the hard conditions of life, that much of our action is to avoid pain, and no calculus is necessary *here*." A speaker of robust vitality might have said as much with a wry smile of humour, but he uttered it with a look of *color che sanno* in his face not easy to forget. It was not often indeed that he looked other than jaded and 'driven' when he entered his class-room, promptly closed the window next him, or else drew on with swift dexterity his black silk skullcap, and took his seat. A guide of *la grande montagne* once said as we set out, 'One should always start as if one did not quite know what one meant to do'. Under-assertiveness of this kind characterised the beginning of Croom Robertson's lectures. He did not exactly 'fool around,' but, placing in front of him a minute porte-feuille of notes, which he never consulted, he would commence, gazing side-ways up the sky, in a high-pitched, weary, distant voice, the words dropping from him clear and rhythmic, but with detachment and indifference. This at least was his usual way while he recapitulated 'last day's' lecture, often clothing his previously expounded arguments in an entirely fresh dress. To take the first instance I find, after setting forth the nature of ethical philosophy and its connexion with logic and æsthetics, he opened thus, the week after: "The fact that we *can* distinguish these three regulative bodies of doctrine,—mutually independent,—mutually unresolvable,—exhaustive, is to be regarded as a decisive argument for the tripartite division of mind. In psychology it is often hard to isolate the three and secure independence for them, but we can distinguish well enough that Intellection in the end has to be made True, Conation in the end has to be made Good, Feeling has to be raised to the grade of the Beautiful. And we cannot add hereto. The summary is exhaustive. True, we must discount from Intellection all save 'thinking' to come under the regulation of Logic; still we can fairly enough say that Logic regulates Intellection."

But this apathetic phase was short-lived. Energy either grew upon him as he broke fresh ground, or blazed up suddenly, but it never failed to respond to the mute demand in the eyes that were attentive, to the need in those that looked carelessly, and to hold us in the sleepiest hour of the student's day, wakeful, spell-bound, as though not logical sequence alone, but δύναμιν ἐξελθοῦσαν from the ardent, eloquent spirit were stirring one and all to receptive activity. His own illustrations bear me out in part. "You might say that, whereas I was silent for one moment, and speaking the next, here was action going out, but no afferent stimulus. In a better example we might see this, but just then I had before me the sight of your expectant faces." Session after session discovered him delivering each to him familiar and well-worn stage of the "element-

ary" course to which the Grote professor is bound down, with all the zeal and zest of an entirely fresh exposition. And careful as he was to impose none of his own strong convictions as dogmas, no words can adequately convey the intense earnestness of manner and speech with which he sought to carry the listening intelligence up to commanding standpoints. "*I want to give you* a notion of how, from different points of view, this question of defining the conditions of knowledge has been met." "I want to bring prominently before you this OBJECTIVITY of knowledge . . . . I know NOTHING REALLY, unless I can show you capable of knowing it *as well as I*." "But mark me here—I PROTEST against ranking our experience of space with that of other sensations!" "I WARN you against such careless phrases as 'Brain thinks';—it's *stark nonsense!*" "As to the specific character of the nerve-process accompanying every mental process, we are much in the dark and shall ever be probably. Till we are *not* in the dark, till it can be demonstrated in detail, *no one can compel you to accept* the general statement." Not less vigorous was the emphasis with which he set forth his own position, when need arose to submit it as non-coincident with the theories of other thinkers. "Now for a confession!" was the exclamation introducing his dissatisfaction as an experientialist, with experientialist theories of external perception: "Else I *can* not get on!" the concluding alternative. But it is not possible by fragmentary citations to reproduce the intense fervour with which all such asseverations were put forth, infusing the dryest arguments with the character of things beautiful. Leaning often far over the table as though he would project his own insight into his *parvulos trahendos*, he seemed to be wrestling with the ignorance, or callousness, or false views in each several mind, his glance for the most part directed just over the heads of the class, yet apparently cognisant of each student's mental progress. Inattention was as difficult as interruption: when once a student broke a momentary pause by putting a question, the professor, as though unaware, resumed his argument forthwith, and talked through questioner and question more fervently than ever. I hasten to add that the more usual mode of hearing questions from the chair at the end of the lecture was not merely permitted. "You will be failing in a *positive duty* if you omit to bring me any difficulties. But let me advise you to write them down: half and more of your difficulties will vanish when once you have put them into definite form." Nor were his counsels accessible on these occasions only. At any time during term or vacation, the appeal of perplexity would secure a prompt reply, crowded more often than not into the back of a post-card,[1]—a deliverance *urbi et orbi*, as he once said to me in humorous apology, pleading the delicacy of his then dual function of professor and examiner.

Yet let it not be supposed that this fervid manner, which, as Dr. Bain truly says, spent his limited strength far too lavishly, beat out earnest and emphatic monition and assertion incessantly. It would have failed in effect. He never laughed, he could not really be said to smile, *ex cathedra*, but touches of humour, like rays of frosty sunshine, not seldom lit up the less crucial phases. It was more revealed in the manner of saying than in any word-play, but I can remember such as these: "Smells are to quadrupeds rather intellective than emotional, especially to dogs, for instance. Why? They cannot afford to be as we. We can turn up our noses, as they cannot." (Possibly not an original point.) "We Scotchmen 'feel a smell,' and with considerable psychological

[1] [With Prof. Robertson the writing of post-cards was a fine art.—G. F. S.]

justification." "Is *Space* a form of external sensation?—I omit *Time*,—for lack of it." An Aristotelian alternative was reverted to with complacency: "Every step in thought that proceeds under the laws of thought may be expressed in terms of necessity. Deny—and you are a vegetable!" In his discourses on the works of special philosophers the relative freshness of the subject and the relatively intimate discipleship of fewer, more appreciative hearers, drew him on to somewhat happier and even more vivacious disquisition. Few could be more jealous than he to wave off flippant criticism of thinkers past or present on the part of the novice; on the other hand, he gave free play in that closer circle to the promptings of his own matured satire, in racy allusions to the quarrels of commentators, the defects of theories, Oxford psychology, and what not.

But wherever and whenever his voice was raised to instruct, his utterances were invariably characterised by a severe and concentrated eloquence—an eloquence which clothed every thought in purest English, which never ran away with him, which rigorously abstained from analogy and metaphor, and yet, impelled by full conversance with its matter, repeated each point in a double or triple paraphrase of words, securing a maximum clearness, and allowing each following mind to overtake and take in. At the same time there was no lack of illustration, and that of the simplest and next to hand. No place could be more depressing than the kind of class-room he lectured in, nevertheless he projected a tiger into the adjacent one to lend a spring to his criticism of Dr. Bain's Theory of Belief, he diverted the disturbing annoyance—exquisite to highly strung nerves—of noisy youths in the corridor to illustrate procedure in psychological analysis, he made the exasperating hour-bell bear witness to the ultimate constituents of mind, he made the ugly dado do service in spatially referring sensations, while the inartistic iron pillar, very much in the way as it always was, has become for all his students a "work outlasting monumental brass," the "obstacle" to typify the fundamental property of Resistance in objective perception, the dual symbol of the phenomenological *How* and the epistemological *What!*

No, there was not much excuse for a student of average abilities and application who failed to make headway at the feet of Croom Robertson. His expositions were so artistically disposed that it was comparatively easy to set down in notes without much pressure, not only the substance of what he said, but often the form as well. There was an entire absence of verbiage or 'padding'. The lecture never broke down into a talk; the sentences were terse, pithy, polished. But on the other hand he never hurried, nor even once introduced unfamiliar terms without carefully leading up to and determining them, while every point was reiterated with strenuous emphasis. What remained of the Scotch accent, which in his earlier London days he had been at much pains to smooth down, only served with its varied pitch, incisive accents and rhythmic cadences to throw his emphases into higher relief. To have technical terms dragged in from the books by way of answer to his catechising, which he himself had not led up to and introduced, thwarted him and called forth a rebuff, so fastidious was his procedure in guiding to new ground.

Mindful of "the notable and deplorable state of psychological and philosophical terminology," his own choice of nomenclature was, it need hardly be said, a model of studied selection, applied with unswerving consistency, and, when occasion arose, justified in detail. Instances are not far to seek in memory. He would not admit the *philosophical* study of Ideals of truth, goodness, and beauty into the category of sciences, reserving under the latter head purely phenomenological inquiries. The

term 'normative science' he practically ignored. Logic, Ethic, Æsthetic, dealing with what ought to be, as formulated by intellectual construction from data supplied by investigation into what has been, is, and, given certain tendencies, will, or may be, were for him "bodies of regulative philosophical doctrine". Again, he invariably used Intellection for Cognition, Conation for (simple) Volition. Cognition implied the committal of oneself to a *cognitum*, was used equivocally for both process and product. Intellection better connoted bare intellectual process or *coming to know*. Will and Volition were not simple enough for the ultimate conscious residuum denoted by *Streben* or *tendency to act*. Needing Affection equally, as the third complementary equivalent in psychology, he mourned over its crippled popular use. "Bain falls back on a term which is safe if carefully used: feeling is Excitement. Yet here too there is a narrower sense. 'To be affected' is after all the more effective term." "Idea" was too hopelessly ambiguous to be used technically. In intellection progress from simple to complex, regress from (sense) presentation to re-representation, were adequately indicated by Percept, Image and Concept. 'Thought,' on the other hand, was a valuable term practically thrown away by psychologists.

Nothing again is more characteristic of his jealousy for logical purity of diction than his deprecation of the use, in a theory of sensation, of such a term as 'sense of movement'. "To account for space from movement is to beg the question. Movement is only explicable in terms of *space*. One is aware of some *thing* going from one *place* to another. Active touch, touch with a coefficient of '*consciousness of activity put forth*, is all that sense (discounting active sight)' gives us." Another anxious monition was: "Never confound 'moral intuition' with 'moral instinct,'—the primitive power of judging with the primitive tendency, or ability to act,—knowledge not got from experience with action unlearned."

Carefulness in formal distinctions may seem to some mere academic logomachy and time lost. Not so to those who hold with a colleague of my late master that "the true aim of a teacher must be to impart an appreciation of method and not a knowledge of facts":[1] not so to those who are conversant, as to method, with the modification required in scientific analysis when applied to the matter, and adjusted to the standpoint of psychology and of doctrines based on psychological data. Consistency in concepts becomes of as much importance as order and cleanliness amongst the bottles and labels of the chemical experimenta. "To show this clearly—the *distinction* and the *bond*—that is my chief task; for many are incautious," were the words with which Croom Robertson would launch into an inquiry. In his hands the study of Mind became almost, if not quite, as forcible an organon for instilling the principles of scientific analysis as one of the experimental, quantitative sciences. To resolve the complex into the simple, to explain a phenomenon *in terms of* another category of phenomena, to find the *law of its happening*, to inquire into some particular *with reference to* some general notion, under a certain aspect, in a special connexion, and so forth, together with the testing questions applied to current definitions and theories, to elicit what was really the ground-idea of some class (with, it might be, some such verdict as this: "Whatever else Belief is, THIS is not the most fundamental aspect!")—all this really simple procedure, uniformly and consistently carried out, gradually and deeply impressed on the mind the unity of all scientific method. No text-books known to me, however

[1] Prof. K. Pearson. *The Grammar of Science*, p. 8, footnote.

substantially sound in procedure, would be likely to effect as much for the "self-taught" student in mental and moral science and philosophy. This at least was Croom Robertson's opinion, and he roundly denounced the extent to which candidates for examination in the subjects over which he presided at the London University sought to qualify themselves solely by systems of reading and written tuition, none the less that he on one occasion recommended this method to myself by way of *supplement* to oral teaching.

From beginning to end his course was one long lesson how to attain truth under the aspect of Consistency—the Larger Consistency which includes both formal and material agreement. And to this end he made his exposition, in each branch of his composite subject, a continuous and thorough-going application of the definitions and concepts with which he set out, so that the whole complex of notions fell apart and redisposed itself around some fundamental axis of thought. In this way for instance he made us grasp the rationalising of *all* formal logic under the "Laws of Thought," and of all applied or material logic by the process of evolving Induction out of Analogy. The subjective phenomenon of Conscience and the source of its dictates knit together the student's confused notions gained from ethical treatises: the subjective phenomenon of Reality, its sources and implications, imparted backbone to metaphysic.

"Distinction and the Bond," as the tonic chord, was from his opening lecture made most audible and explicit. He then planned out, as he told me, and grounded the whole of his procedure, according to his view of what constituted right method in approaching and cultivating the investigation of experience based on psychology regarded under its unique and more proper aspect of *the* Subject science. This I have heard him do by setting himself at the outset to rationalise, as if by way of apology, the present wording of the title of the Grote chair. Criticism of it served to launch him into a disquisition on the inter-relation between science and philosophy, so lucidly set forth as to give the crude learner insight into the real import of this new departure in his studies, clearing away the dust for those who had pictured a vague mass of something 'transcendental,' and revealing to those who imagined they were substituting for mathematics something requiring only a little common-sense and journalistic facility, the length and steepness of the way before them.

Without a thorough grounding in the science of psychology he would have no one stir a step in the systematic study of philosophy. Kant and many another illustrious thinker had by wrong procedure built on sand. To give more than merely logical priority to "First Principles" was "at this time of day" a regress from the method of sound induction. On the other hand, many British philosophers had stayed so long over their psychology that they never got to philosophy at all, or if they did spoilt their scientific analyses with it, not distinguishing what they were about. "Whereas the path of salvation lies in distinction." "Here I am mixing gloriously psychology with ethics," he once said joyously, "but at all events I confess to it, that it is not Ethics at all."

It is not possible in the scope of a memoir to do justice to an influence which quickened many lives for their life-time, nor, in any way, to duly appraise the resultant tendency of that influence in different personalities. In its intensely critical methods, whether these are applied to ordinary subjective experience, current theories or work sent in by students,—in which literary style and method were even more severely tested than matter,—it would, I believe, be of the nature of a highly regulative, often of an inhibitive, force, more effective for the fluent and

self-confident, than for the self-critical and diffident. Positive praise was a thing unheard of. Commendation might arrive now and then by very indirect communication, but directly could only be inferred through hope on the strength of absence of blame. Intentionally he had of course no wish to paralyse intelligent effort. "I think you are quite right to make this plunge," I once heard him say, "I have no faith in the waiting on counsels of perfection." But this is a minor matter. The indubitable and lasting benefit of his teaching was the insight it afforded into the working of a fine, profound judgment when confronting, and co-ordinating in its perspective, the complex continua of thought and life, so presented that the methods of that working were handed over as a heritage to the listener to be assimilated and applied in his or her own case.

And as to the substance of what he taught, seeing how thus untimely the hope has been cut off of receiving from his hands an integral view of his thoughts on any great questions of philosophy, the idea may suggest itself to some who heard these orally, whether enough of recorded material is not in their possession to enable any of his more competent contemporaries to synthesise and perpetuate what of it is chiefly and worthily distinctive.[1]

CAROLINE A. FOLEY.

HELEN KELLER.

[" No mere faculty of expression, however, can account for the extraordinary faculties of this fascinating child. . . . We propose to return to the subject in the next number." A pathetic interest attaches to these words when we remember that the subjoined signature was that of the late Editor of MIND. The present writer has attempted to continue the examination of the Report at which Professor Robertson was engaged shortly before his lamented death.]

The reader is already acquainted with the method of instruction pursued in the case of this gifted child (pp. 575 *et seq.*); in the following pages we propose to give an account of those intellectual and moral characteristics to which the epithets "marvellous" and "extraordinary" may be applied without misgiving. We must remember that what is recorded of Helen refers to a life of but eleven years, in the last three of which she has been brought from darkness and perfect isolation to light and communion with her fellow-creatures.

Helen is an insatiable reader, has a remarkable memory, and a no less remarkable power of assimilation. Her reading causes her to live, as it were, a double life, the reflexion of which may be seen in her facial expression, so quickly and deeply is she impressed by all she reads. For example, after reading *Macbeth* (*Lamb's Tales*) she was greatly excited: "It is terrible! it makes me tremble!" After thinking a little while she added: "I think Shakespeare made it very terrible, so that people would see how fearful it is to do wrong." Her thoughtful nature is well exemplified by the answer she made to a sagacious person who asked: "Are you a Republican or a Democrat?" "I am on the fence. I must study civil government, political economy, and philosophy, before I jump." Her incidental references to her own affliction are indescribably touching. After hearing a poem on Beethoven she said: "I am 'wedded to silence' like the great master." She writes in a letter that the following lines from *Evangeline* "will always make

[1] [This suggestion will probably be carried out.—G. F. S.]

me cry": "Something there was in her life, incomplete, imperfect, unfinished," &c. Her quickness of perception is amazing. Examining the cast of a baby's face she spontaneously broke out:—

"A brow reflecting the soul within
Untouched by sorrow, unmarked by sin".

Many hours after examining a cast of Dante's face she asked how grief was brought with his life. But perhaps the best way of exhibiting her fascinating qualities, her perception, her imagination and power of literary expression, will be by the following extracts taken at random from her numerous letters, and from the conversations to be found in the Report.

"The mountains are crowding round the springs to look at their own beautiful reflexions. . . . I wish you could see the lovely fragile little thing (a new-born sister) that is curled up in mother's arms. . . . I found Mildred as shy and merry, and as lovely as a summer morn. . . . We have had several thunderstorms . . . (we) watched . . . the great black clouds chasing one another swiftly across the sky, seeming to growl angrily when they met, and sending bright flashes of lightning at each other like swords. I liked to fancy that there was an army of warriors living in the planet Mars, and another army of giants living in Jupiter, and that all the noise and tumult was caused by a great battle going on between them. The rain, I suppose, . . . shows that the warriors are sorry for their bad conduct and are weeping over the distress they have caused."

She can produce charades like the following by the dozen, and it is really extraordinary that a child with a "language life" of but three years should have so rapidly acquired such fluency of diction, and such a subtle perception of the meanings of words. "In storm but not in thunder—In tempest but not in wind—In hymn but not in song—In silent but not in mute—In compound but not in mixture—In cunning but not in cute. The whole a character in the Trojan war."

"Is it queer for a child to feel like laughing and crying all at once? But I remember Mother Nature did the same last summer. One day we discovered that it was raining quite hard on one end of the porch, while the sun shone out brightly on the other end. . . . That is just what is happening in my heart. It is raining on the one side, while the other side is bright with gladness." While she sat there thinking, "two dear little birds began to take their bath in the lovely sparkling water, that rippled and danced in the sunshine".

To Oliver Wendell Holmes she wrote: "I love every word of 'Spring' and 'Spring Has Come'. I think you will be glad to hear that these poems have taught me to enjoy and love the beautiful spring-time, even though I cannot see the fair, frail blossoms which proclaim its approach, or hear the joyous warbling of the home-coming birds. But when I read 'Spring Has Come,' lo! I am not blind any longer, for I see with your eyes and hear with your ears. Sweet Mother Nature can have no secrets from me when my poet is near." These few extracts will suffice to show Helen's command of language and her power of recognising the finer shades of meaning in the use of words. The reader will realise how difficult it must have been for the teacher to grapple successfully with the special obstacles which presented themselves in the attempt to give this child of eleven the meaning of words essentially abstract. In every case the simplest possible definition was given, and little by little the child divined the more abstruse significance of the word by its connexion with words already intelligible to her. Her

natural aptitude for language has been fostered by her love for books. "They tell me so much that is interesting about things that I cannot see, and they are never tired or troubled like other people. They tell me over and over what I want to know." At first she had a tendency to omit in conversation any word or phrase not absolutely necessary to convey her meaning, but exercises in the expression of a single fact in as many ways as possible have removed this tendency. Her eagerness to use any means of intercourse with others is marvellous. The caligraph typewriter was learned by her in less than a month. The telegraphic alphabet of dots and dashes is habitually used by her when at a distance from her teacher, the latter tapping on the floor with her foot. She was taught in a few moments a system by which any one may converse with her by means of a glove upon which the letters of the alphabet are written. Although she had no practice in this method of conversation she resumed it after a break of two years without the slightest hesitation. In this connexion it will be well to give a short account of her study of the French language. The idea was her own, and she willingly gave up part of her play-time for the purpose. Here we shall let her teacher speak for herself:—

"Our first lesson comprised some of the sentences oftenest used in every-day conversation. Each sentence, preceded by its English equivalent, was slowly spelled to Helen, who, after once repeating it with her fingers, was ready to learn another. Many short sentences thus became familiar to her within the hour.

"Her first perplexity was caused by the varying forms of the definite and indefinite articles; yet, when her questions regarding them had been answered, and she understood that memory must be the chief aid in the correct use of these words, she fitted them to the various nouns in her vocabulary, with an earnestness which was a certain prophecy of future accuracy; and in all her later work a mistake in their use was rarely made. Accuracy is indeed one of Helen's prominent characteristics. I noticed it especially in her writing. She liked to sit down with her Braille tablet and stiletto, and translate sentences from English into French. If she was at all doubtful of the spelling of any word, or the construction of any sentence, she indicated the doubt to me, by making with her fingers the letters of the word or sentence before she trusted them to the paper. She was much troubled by a mistake of any kind, and, if she discovered one, she was never willing to continue writing until it had been satisfactorily corrected. Idioms did not puzzle her. She seemed to apprehend intuitively that every language has its own peculiar modes of expression, and she also readily accepted the many different verb forms which the French lessons brought to her notice. It was seldom that she was confused, either in conversation or composition, by any verb structure which had been previously indicated in her French exercises.

"Helen soon advanced to a point where I was sure of her enjoyment of a simple French story. The first one which she read was *Un Enfant Perdu dans la Neige*, taken from Paul Bercy's little book, *Le Second Livre des Enfants*. I wrote the story in Braille; and Helen, being familiar with most of the words, translated it very rapidly. Soon afterwards she surprised me by telling it in French. . . . From this time stories were often selected . . . in response to her eager requests. . . . Frequently she correctly translated new words from their close association with some which were already well known. . . . She was quick to notice when there was a similarity between French words and the corresponding ones of our language. Certain French words were especially pleasing to her, . . . there were always some which she designated as *pretty words*."

She soon became "quite adroit in composing sentences within the compass of her vocabulary". The following letter was written in March, 1890, from an English dictation. It was translated by her with astonishing ease eight months later :—

"MELROSE, *le* 27 *Mars*, 1890.

"MA CHERE ELISE,—Dans quelques jours j'aurai une semaine de vacances. Il m'est tres difficile de rester enfermee dans une salle d'etude, quand toute est si belle dehors! A present le temps est magnifique. Deja les cerisiers sont en fleurs, et les collines sont d'un vert tendre et frais. On entend les oiseaux chanter parmi les arbres en fleurs ainsi que le bourdonnement des insectes et le murmure des ruisseaux; on sent la douce haleine du vent impregnee du parfum des premieres fleurs. Oh! que je serai heureuse quand je pourrai etre libre comme les oiseaux de l'air, et courir tout le jour dans les pres et les bois! Voulez-vous venir passer les vacances avec moi, chere Elise? Je suis sure qu' une semaine a la campagne vous ferait du bien. Ma mere vous envoie ses amities, et vous prie de venir.

"Ecrivez-moi quel jour et a quelle heure vous viendrez, et nous irons vous attendre a la gare. Je vous embrasse de tout mon cœur.

"Votre amie devouee, R. H. K."

"Helen has not yet been taught the use of French accents, and therefore they are omitted from the above letter. Her lessons with me preceded her first knowledge of the vowel elements gained from her work in articulation, and I did not attempt, at the beginning of her study of the French language, to introduce the accent marks, the meaning of which, at that time, would have been very obscure to her.

"Helen was much distressed by a failure to remember anything which she had ever known, and it was seldom that she suffered this pain. It became evident, during our second lesson, that she would not need reviews. The sentences of the first lesson comprised so many new words, that I thought it best to have them repeated before more were learned. When I asked questions to suggest the sentences of the previous lesson, Helen said, in an emphatic, surprised way: 'I know them! Please teach me something new!'"

It was in October, 1889, that she asked her teacher (Miss Marrett) to give her lessons in French.

"In about three months," says the Director of the Perkins Institution, "she was in possession not only of the keys to the treasure-house of her new venture, but of a great quantity of materials and of the art of handling them skilfully and of putting them to proper service in the construction of sentences. On the 18th of February, 1890, I received in Athens her first composition in French, which I am assured was written without any assistance on the part of her instructress, and which is copied here *verbatim et literatim* :—

"SOUTH BOSTON, MASS., *le* 1 *Fevrier*, 1890.

"BONJOUR, MON CHER AMI,—J'ai recu votre lettre charmante. Vous etes bon, et je vous aime beaucoup. Comment vous portez-vous? J'espere que vous vous portez mieux. Je parle Francais et Anglais à present. Les petites filles sont tresbonnes, et ma chere petite soeur est belle. Je me promene tous les jours pendant une heure. Aimiez-vous

l'etude lorsque vous etiez jeune? J'aime à lire. Ma mere a beaucoup de belles fleurs chez nous. J' aime mieux les roses et violettes. Ma mere m'a ecrit que les rosiers sont pleins de boutons. Les oiseaux chantent doucement comme dans le mois de Mai. Je ne peut pas parle Francaise ou l'ecrire avec beaucoup de facilite. Quelques enfants ont ete tres-malades avec le diphtheria au gorge. Lily Edson est mourut. Je suis tres-fachee de pauvre Lily. Ma mere, mon pere et ma jolie souer viendront a Boston le Juin next. Serez-vous heureux de les voir? Je serai bien aise d'aller avec vous a l'ecole de les petits enfants. Vous serez bien aise a savoir que je peux dire correctement tous les heure de le jour maintenant. J'espere que j'aurai une belle montre bientot. J'ai neuf ans, ma soeur n'a que trois ans et demi. Voulez-vous m'apporter des livres Francais de France? Je veux que j'etais a Athens avec vous pour jouir tous les belle choses. Ma chere institutrice a ete tres-malade, mais elle est beaucoup mieux maintenant. Je pense a vous toujours, et j'aime vous. J'aime m'amie, Mademoiselle Kehayia aussi. Il fait beau temp au jourd' hui, mais il fait bien froid. Voulez-vous aller a Paris avec moi quelquefois, je veux voir de belles choses. M'excuser les fautes, s'il vous plait.

"Pensez a moi et aimiez-moi toujours. Au revoir, mon cher ami. Ecris a moi bientot.

"De Helene A. Keller.

Space forbids any detailed description of her moral growth, for which we must refer the reader to the pages of the Report. It is enough to say that the same intelligent care that has been so successful in training her intellectual faculties has as wonderful a story to tell of her moral constitution. "She is a living negation of the doctrine of total depravity," says the Director, "and it is only too rare to meet with a soul as beautiful as that of the happy child to whose history this Report is devoted. I cannot refrain from one final quotation which will be found a striking illustration of the vividness and originality of her fancy:—

"A Dream.—Last night I dreamt that long, long ago, when the birds and flowers and trees were first made, the great God who had created all things sat upon a beautiful cloud which looked like silver, and seemed to float in the midst of the blue sky like a throne; and He looked down upon the earth—*the wonderful world He had made out of His own thought.* (Italics mine.) Oh, how beautiful the earth was! with her great mountains climbing upwards to the sky, and her valleys filled with sweet-smelling flowers and delicious fruit. The trees seemed alive with beautiful living things: the little birds' joyous songs made the air vibrate with music. I felt it in my dream. I knelt on the cool, green moss that crept down to the edge of the merry little brooks, and I touched the water as it rippled past me. The broad, deep lakes were as quiet as little sleeping babies, and I felt the ground tremble under my feet when the river went rushing past to join the stormy ocean. Then I went to the shore and put my bare feet in the water, and felt the waves beating against the shore continually; and God smiled, and the world was filled with light, and there was no evil, no wrong in all the world, only love and beauty and goodness. Just then I felt teacher kissing my lips, and I awoke."

W. J. Greenstreet.

PSYCHOLOGICAL NOMENCLATURE.

The following remarks are the outcome of a conversation held with Profs. Baldwin and Ladd at the Philadelphia meeting of the American Psychological Association. I do not think that any apology is needed for the initiation of a discussion of psychological nomenclature, though I am well aware that, for my own part, I can more easily point out difficulties than answer them.

Let me say at the outset that I presuppose (1) an autogeneous theory of Will, and (2) the recognition of the process of Fusion, as distinct from that of Association, of conscious content. The fundamental difference among psychologists as regards Volition should, it seems to me, condition a corresponding difference of terminology. Words which are common to the heterogenists with the autogenists—"impulse," "attention," and the like—will always be terribly equivocal. But as neither party is likely to give up the use of them, one can only suggest a distinction and definition of the ground-processes of mind, which shall be the most careful possible; this portion of the nomenclature of a psychological system thus furnishing the key to the significance of the further terms employed. As regards Fusion and Association, I would roughly distinguish them as follows: in the Fusion, the factors recede before the total impression; in the Association, the factors are (at least) as clearly recognisable as they were or would be separately.

In the developed human consciousness—our only starting-point—we seem to find the interplay of three processes. These processes have been named Sensation, Feeling, Conation. It is to be noticed (1) that all three terms are verbal nouns; (2) that each has an adjective—sensational, affective, conative; (3) that each has a verb—sense, feel, conate. "Conate," it is true, does not appear to occur in the dictionaries, but it is an obvious form. More serious is the objection that may be taken to the adjective "affective". In face of it, two alternatives seem possible. Either one may use "feeling" itself as an attribute, and speak, *e.g.*, of the "feeling element" in a complex process, of the "feeling aspect" of the pains of touch, and so on: though the active connotation of the word is against this. Or one may take the series—affection, affective, be affected. Then the child would *sense* the red of its ball, *be* pleasurably *affected*, and *conate* an action of seizure. The passive form would often lead to clumsiness of phrasing; would it lead to psychological error? Only a consensus of opinion can decide which of the three possibilities is the least objectionable.

But when our choice is made, the real difficulty begins. Suppose that we have chosen "sensation," "affection," "conation". These processes are the ultimates of scientific analysis, not separate existences. No one of them occurs of itself, in isolation. We experience only fusions of all three—fusions in which now sensation, now affection, now conation predominates, but in which each is represented to some extent. In ordinary parlance, as in psychology, we name these after the prevalent ground-process. But we must recognise the liability to confusion which such usage involves. Take Prof. Sully's definitions as one instance out of many. "Sensation" is the "simple psychical phenomenon resulting from the stimulation of the peripheral extremity of an afferent nerve when this is propagated to the brain". Affective elements, *i.e.*, "simple modes of agreeable and disagreeable feeling, like . . . sensations, . . . are given as the immediate psychical concomitants of nervous stimulation". The two things are, by analysis, different. Yet the writer speaks of the "affective element in sensation," thereby returning to the very

same popular usage which he deprecates.[1] Dr. Lehmann, to take another example, has realised this difficulty, as regards the term *Gefuehl*. The *Gefuehl* is at once the affective element in a (characteristically) sensational-affective fusion, and this concretely experienced fusion itself, if the affective element predominate in it. He decides to call the concrete "state of mind" *Gefuehl*, discriminating between its intellectual and emotional elements.[2]

We might, perhaps, employ "perception" (perceive, perceptional) to designate the fusion in which sensation prevails. The fusion in which affection predominates would be a Feeling. Here arises the difficulty of the adjective again! I would incline (in spite of the objection above mentioned) to parallel the phrase "perceptional content" by "feeling content"; or (perhaps) by "felt content". The term "pathic" has the disadvantage that it breaks the symmetry of the series. The fusion in which conation is the chief factor is the Impulse. We have the adjective "impulsive," and the verb "be impelled". No doubt, the passive form, here again, is a relic of previous psychological systems; this must be borne in mind, and the phrase used with caution. It is, however, just as well that we possess it.

So far, then, we have:—

(1) The conscious ultimates:

sensation	affection	conation
(sensational	affective	conative
sense	be affected	conate);

(2) The concrete mental processes:

perception	feeling	impulse
(perceptive	feeling	impulsive
perceptional	pathic	
perceive	feel	be impelled).

The English terminology, after all, is fuller than the German. We find current, in the latter language: *Empfindung*, *Ton* and *Wille*; *Wahrnehmung*, *Gefuehl* and *Trieb*. I do not think that much exception can be taken to the use of *Wahrnehmung*. The employment of *Wille* is objectionable; the word is wanted elsewhere. But what other is there? We cannot render Affection by *Affect*; the latter has a definite meaning, as equivalent to emotion. *Ton* is awkward, and its theoretical implications are in any case disturbing. Perhaps *Affection* might be introduced. That would give us:—

(1) Sensation, *Empfindung*; Affection, *Affection*; Conation, *Wille*; Sense, *empfinden*; be affected, *afficirt werden*; conate, *wollen*.

And in the other series:

(2) Perception, *Wahrnehmung*; Feeling, *Gefuehl*; Impulse, *Trieb*; Perceive, *wahrnehmen*; feel, *fuehlen*; be impelled, *getrieben werden*.

Two objections may be raised at this point. It may be said that these tables are too schematic. I do not, of course, want to cut Psychology to fit a terminology; and if it be the general opinion that the science is not yet ripe for exact definitions, I shall be content to wait. But though premature rigidity is bad, the present fluidity seems worse. Secondly, it may be argued that the separation of elements from concrete processes

[1] *The Human Mind*, i. 81, 133, 82.

[2] *Die Hauptgesetze des menschlichen Gefühlslebens*, 55, 56.

involves a waste of good terms. But this separation is of very great educational importance; students tend constantly to confuse the two things. And if we go on working at Psychology synthetically—a course which, *pace* Prof. James, seems just now the most promising—it becomes a matter of necessity.

One further point. In the fusions of which we have spoken a single element has predominated. There is no reason, *a priori*, why two elements should not find equal representation, or approximately equal representation, in the same fusion, unless, indeed, the "unity of consciousness" were appealed to. Facts must decide. We do not find, as a matter of fact, a namable concrete process of the kind under consideration in which sensation and affection are equally strong. On the other hand, we do find such a process in the cases where Conation is one of the prevailing elements. Attention is nothing else than a fusion of the ultimates, in which Sensation and Conation together are in the ascendant in consciousness.[1] This is indicated, indeed, by the common phrase "sensory attention".

We have then:—

(1) No namable fusion showing a joint predominance of Sensation and Feeling.

(2) "Sensory" attention (*Aufmerksamkeit*); a fusion showing a joint predominance of Sensation and Conation.

(3) Perhaps an "affective" attention—a fusion showing a joint predominance of Affection and Conation.[2] It is a common experience that attending to a pain "makes it worse"; but it appears to be impossible to attend to Affection as we do to Sensation.

It might be urged that there is a continuous progress from Perception to Feeling through a series of more and more "toned" Sensations; and that, therefore, theoretically at least, there must be a point at which the sensational and affective elements are in equilibrium. I cannot recall any experience of this character definite enough to deserve a special name. And there is no psychological term extant to express such an experience.

The three great psychological chapters can very well retain their traditional headings: Intellect, Feeling, Will (*Vorstellung, Gefuehl, Wille*). Of the more complex mental processes I will not say much in this paper. Perception-complexes seem best designated as Ideas (*Vorstellungen*).[3]

[1] Expectation and Retrospection are fusions of the same kind as is attention, but of a more complicated order. The content in Expectation is an apperceptive ideational (representative) combination, with which is fused an attentional amount of conation. The content in Retrospection is an associative ideational (representative) combination, with which is fused so much conation. Their is thus a twofold activity of apperception in the former process; this activity, however, being single at any given moment.

[2] "The *emotion* is ultimately a sensational affective fusion. Perhaps the meaning of the term could be extended to cover more simple states than those usually denoted by it."

[3] Where the idea is presentative, a verb is supplied in general by the dominant perception: only a word for "I perceive by touch" is wanting (could one say: "I tact"?). Whether it is presentative or representative, the forms "ideate," "ideational" can be employed.

These, like sensations and perceptions on the one hand, and like affection and feeling on the other, may be presentative or representative: these terms are convenient, and more or less stereotyped in meaning. It is to be noticed that, while perceptions and ideas are almost infinitely various, the qualities of affection and conation remain the same throughout the whole course of mental development. Affection is only and always pleasant or unpleasant; conation has but one quality—apperception, if we care to call it so. The affective side of an idea, therefore—its affective value, over and above the affective values of the perceptions which compose it—is due to what we can only term, for distinction's sake, an affection of a higher order. The idea is pleasant or unpleasant by virtue of an affective quality which is identical with the affective quality of the perception. The like holds of complex processes involving Will. The quality of the element dominant in the impulse and in the voluntary action is one and the same. There are no qualitative differentiation and elaboration of felt and of impulsive content, as there are of perceptive. Hence the difficulty of giving certain conscious processes a specific name.[1]

In conclusion, I will attempt to analyse into their constituents[2] one or two of the more compound processes, which were discussed in the conversation alluded to. (1) *Desire.*—The conscious content, corresponding to the desire of an object, would be a fusion of (*a*) the idea of the object, presentative or representative, *i.e.*, practically, a complex of sensations: (*b*) affection, presentative and representative, or representative only; the latter being the representation of the pleasure attaching to the attained object: (*c*) so much of conation as is implied in attention. Dominant in the whole fusion is the affective element. (2) *Voluntary Action.*—The content, whose expression is a voluntary action, would consist of (*a*) representative ideas, ideas of the action itself: (*b*) representative affection; the representation of the pleasure attaching to the completed action: (*c*) conation to the extent found in impulse. Dominant in the fusion is the conative element. (3) *Deliberation.*—Here are present in consciousness (*a*) an alternation of representative ideas: (*b*) a similar alternation of represented affection: (*c*) an attentional amount of conation. The fusion is of the same nature as is attention itself; Will is balanced by Feeling or Intellect. Just as attention may pass over into impulse, so may deliberation pass over into the voluntary action, as analysed above.

I do not claim, in these remarks, to have offered anything new or original: it was rather my hope that they might call forth other expressions of opinion on the subject of terminology.[3]

E. B. TITCHENER.

[1] *Cf.* Wundt, in *Phil. Stud.*, 391 ff.

[2] Of course, only schematically.

[3] For this reason I have thought it better not to weight the essay with references. Nor have I sought to define, except by implication, the three terms 'sensation,' 'affection,' 'conation'.